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ABSTRACT

The Des Moines (Iowa) Public Schools continually evaluate the process of teaching for learning in order to provide quality programming for its diverse student body. Different methods of student outcome assessment are used to identify areas for study and analysis. This report provides information about the achievement of district students on: (1) criterion-referenced assessments; (2) advanced placement tests; (3) the District Composition Assessment; (4) the Iowa Tests of Basic Skills (ITBS); (5) the PLAN assessment (norm-referenced tests for 10th graders); and (6) the American College Testing Program (ACT) assessment. Results from the criterion-referenced tests show that at the elementary level, 76% of all scores were above the 70% standard, with 64% and 54% of the middle school and high school scores above the standard, respectively. A continuing challenge is to address the achievement gaps that exist between nonminority and minority students. The district was represented very well on Advanced Placement tests, with a number of students recognized for their achievement. In composition assessment, the percent of students in grades 3 and 5 achieving the "competent" standard was less than the target for the school year, but at grades 8 and 11, the percent achieving the competent standard was slightly above the target. District students scored well on the ITBS. In addition, 10th graders scored well on the PLAN assessment. The mean district score on the ACT was a 20.9 while the national mean was 21.0 and the Iowa mean was 22.1. For those few Iowa students who took the Scholastic Assessment Test, scores were well above the national means for verbal and mathematics scores. Six appendixes present definitions and tables of test results. (Contains 30 tables.) (SLD)

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ASSESSMENT PROGRAM RESULTS 1996-1997

Des Moines Independent Community School District
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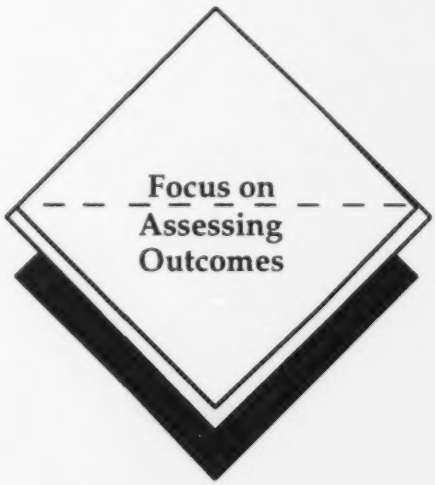

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Executive Summary

The goal of the district assessment program is to provide information to improve teaching and to increase learning. Toward that end, students participate in a number of district-level assessment activities, including criterion-referenced, objectives-based subject matter tests, Advanced Placement tests, the district's performance-based composition assessment, norm-referenced standardized assessment (ITBS, PLAN), and college entrance examinations (ACT, SAT).

Test results are shared throughout the year in many ways. Paper documents and reports are produced, student test results are returned to schools in electronic format (on diskette), and subject-area supervisors and testing personnel make presentations of test results at various meetings.

Highlights of Results

District Criterion-Referenced Tests

Regarding the District Improvement Plan Target # 1:

- At the elementary level, 76 percent of all scores (for all tests and all students) were above the 70% standard, two percentage points above the target for 1996-97.
- At the middle school level, 64 percent of all scores were above the 70% standard, four percentage points below the target for 1996-97.
- At the high school level, 54 percent of all scores were above the 70% standard, sixteen percentage points below the target for 1996-97.

A continuing challenge for the district is to address the achievement gaps that exist between non-minority and minority students, and between students receiving subsidized meals and students who do not receive subsidized meals.

Advanced Placement Tests

The district was represented very well on the Advanced Placement tests. There were six students who were recognized as AP National Scholars. Twenty-eight students were recognized as AP Scholars with Distinction, 18 students were recognized as AP Scholars with Honor, and 42 students were recognized as AP Scholars.

Composition Assessment

Regarding the District Improvement Plan Target # 2:

At Grades 3 and 5, the percent of students achieving the competent standard was less than the target for 1996-97. At Grades 8 and 11, the percent of students achieving the competent standard was slightly above the target for 1996-97.

Iowa Tests of Basic Skills (ITBS)

District students scored very well on the ITBS. The district average for Grade 3 was the 55th percentile, for Grade 4 was the 55th percentile, for Grade 6 was the 56th percentile, and for Grade 7 was the 57th percentile. The following information reflects the percent of students who scored as well or better than one and one-half grade levels above them. This is an indicator of exceptional performance.

- 14 % of the third graders scored as well or better than a beginning fifth grader.
- 24% of the fourth graders scored as well or better than a beginning sixth grader.
- 33% of the sixth graders scored as well or better than a beginning eighth grader.
- 38% of the seventh graders scored as well or better than a beginning ninth grader.

PLAN Assessment

The average 10th grade student scored as well or better than 60 percent of all students who took the PLAN assessment. For all students, scores were highest in mathematics (64), followed by science reasoning (63), reading (58), and English (55). These same students, on average, scored as well or better than 53 percent of college-bound students.

ACT/SAT

In 1996-97, 842 students participated in the ACT assessment. The mean score was a 20.9 (out of 36). The national mean was 21.0 and the Iowa mean was 22.1.

In 1996-97, 146 students participated in the SAT assessment. For all students, the Verbal mean score was 564 out of 800, and the Math mean score was 555 out of 800. These scores are well above the national means of 505, and 511, respectively.

Dissemination of Information

Information provided to schools include:

- Test reports sorted by course, teacher, and class.
- Test graphs of district-level reports for comparison purposes.
- Data diskettes containing student test results for district-wide assessments.
- Reports from test scoring services (ITBS, PLAN).
- In-service sessions held by curriculum supervisors and testing staff.

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DISTRICT MISSION STATEMENT:

The Des Moines Independent Community School district will provide a quality educational program to a diverse community of students where all are expected to learn.

Introduction

District-wide objective assessment of student progress is an essential part of any educational endeavor. Information relevant to how individual students and groups of students are progressing provides schools a basis to determine how successful their practices have been or how practices should be designed to obtain better results in the future.

Assessment results reflect student achievement on identified outcomes, and serve as an indication that a school is indeed achieving its mission. Many measures are used to assess student progress, including nationally standardized measures, district criterion-referenced or performance-based measures, or assessments used by individual teachers within their classrooms.

The value of any indicator system is based on the extent to which it captures the complexity of the teaching and learning process. Any single assessment cannot serve as *the* indicator of educational effectiveness. A multiple method, multiple index approach is recommended to paint a more clear and colorful picture of student achievement, to provide decision-makers with more information to refine the teaching-for-learning process. The use of performance assessments and demonstrations of student achievement may also serve to support numerical test scores.

Education is both a process and an outcome. The purposes for which assessment activities are conducted depend on the formation or summative nature of an evaluation. As long as stakeholders view education as a process *and* an outcome, assessment information can be used to make appropriate instructional decisions to enhance student learning and performance.

PROGRAM OVERVIEW

The Des Moines Public Schools continue to focus organizational energy on the academic growth and development of its diverse urban student body. Purposes of the program are to assess student learning, diagnose instructional need, and provide information for program evaluation.

Assessment results are indicators of student achievement on knowledge and performance outcomes. Any form of assessment used in isolation provides only partial information about a child's academic development or a school district's overall curriculum. Decision-makers who obtain results from multiple methods of assessment have more information to refine the teaching-for-learning process.

Continuous monitoring of student progress provides information for planning activities that will address the needs of each learner by allowing instructional decisions to be personalized. Evaluation of student achievement information at the classroom, building, and district levels allows identification of strengths as well as academic areas in need of improvement. In order to maintain an appropriate breadth of focus of the district's curriculum, student achievement trends in districts with similar characteristics can be monitored.

The district continually evaluates the process of teaching for learning in order to provide quality programming for its diverse student body. Different methods of student outcome assessment are used to identify areas for study and analysis. The purpose of this report is to provide information about the achievement of district students on the following:

- **Criterion-Referenced Assessments**, a series of curriculum-aligned, objectives-based tests, given in grades two through twelve and covering core subject matter areas as well as some electives in the Des Moines curriculum.

- **Advanced Placement Tests**, a series of criterion-referenced tests given to high school students seeking college credit prior to enrolling in college.

- **District Composition Assessment**, a performance-based assessment in which the *test* is the learning activity itself. It is administered in the fall to students in third, fifth, eighth, and eleventh grades.

- **Iowa Tests of Basic Skills (ITBS)**, a series of norm-referenced tests, given to students in third, fourth, sixth, and seventh grades. The ITBS is administered in February.

- The **PLAN** assessment, a series of norm-referenced tests given to a sample of students in tenth grade. The PLAN is administered in the fall.

- The **ACT** assessment (formerly the American College Test) and the **Scholastic Achievement Tests** (or SAT), a series of norm-referenced tests, usually given to high school juniors and seniors for the purpose of determining probable success in higher education.

Disaggregation of assessment information is an integral component of planning for district improvement. Disaggregation of data provides an opportunity to examine equity indicators to determine whether all students are learning and to what degree. Groups for disaggregating data include gender, ethnicity (minority or non-minority status), and a socioeconomic variable (free or reduced-priced meals). It is anticipated that data will be disaggregated on other categories (e.g., special education, ESL) as rules for legal requirements of including all students in assessment activities are clarified.

Resources

The operational budget for the district assessment program, including salaries and estimated benefits, is approximately 0.12 percent of the district's operating budget. For every one hundred dollars that the district spends on operations, the assessment program receives 12 cents.

Procedures

Many processes have been automated for efficiency. Text and graphics for criterion-referenced tests is largely provided "in house." The ability to pre-print answer sheets with student names and identification numbers from the CIMS system has recently been achieved. Testing staff can now request "pre-slugged" answer sheets through CIMS, which are printed at the Mid-Iowa Computer Center facility. ITBS answer documents have bar-coded labels to save classroom time and improve accuracy.

Since most district assessment activities are aligned with the curriculum, assessments can provide additional learning experiences for students to check their understanding of important concepts. Students average approximately 1.5 percent of their time in school taking district assessments. The increase from past years is due to mathematics tests being given both at mid-year and end-of-year, and modular science tests that are given at the end of each unit or module.

In anticipation of the dissolution of Mid-Iowa Computer Center, testing staff are currently developing procedures to create district data sets by bringing together test files from each school, combining them on a desktop computer, and analyzing them using microcomputer-based statistical software.

1996-97 ASSESSMENT RESULTS

Nature and Purposes of Assessments

Criterion-Referenced Assessments

The district's criterion-referenced assessment program covers a wide array of subject matter across curriculum areas and grade levels. The primary intent of these tests is to determine the extent to which the curriculum being taught is learned. District criterion-referenced tests are not timed, allowing students reasonable time to complete all items. Each test contains groups of items measuring similar concepts (strands), and is designed to evaluate student mastery of the objectives of a given subject. They are also designed to diagnose student learning or identify deficiencies in a student's reasoning process. Because these objectives-based tests are aligned with the adopted district curriculum, scores are reflective of a student's achievements in a specific content area. The district's criterion-referenced tests provide a more accurate picture of what is taught and learned than norm-referenced, standardized tests.

The primary purposes of the criterion-referenced assessment program are to evaluate the curriculum and to assist in instructional planning. At elementary schools, data from these assessments supplement the student achievement data gathered through individual teacher assessments. It is anticipated that these assessments will be able to also supplement the information consolidated in the ABACUS instructional management system. At the middle and high schools, data are also used for individual student evaluation (as a part of assigning course grades to students).

Composition Assessment

Performance-based assessments provide information regarding what a student can *do*, given a specific task. The district's performance-based assessment is a composition assessment. Students in Grades 3, 5, 8, and 11 select one of three topics and compose an essay on the selected topic. Essays are read by trained readers and scored holistically (the overall impression) and on a number of dimensions that have been determined to be important components of writing skill. The assessment is aligned with the district's objectives for language arts, and student compositions are evaluated against established standards for each objective area. As such, the composition assessment may be viewed as objectives-based.

Standardized Assessment

Norm-referenced, standardized assessments provide general information regarding how our district as a whole compares with other urban districts with similar characteristics. National norms are used as the standard of comparison, since the district's urban demographic characteristics are more reflective of a national reference group than a state reference group.

Standardized assessments help prevent a narrowing of curriculum focus by selecting items that test a broad range of objectives from each subject area. These tests are not intended to perfectly match any district's curriculum. Keeping in mind that a test such as the ITBS is an assessment of *basic* skills, it is a fair measure of student achievement in most areas. With regard to individual scores, a student scoring at the 50th percentile is on grade level, and should be able to enter most schools across the nation and begin achieving success.

Interpreting Student Achievement Information

Student achievement information can be evaluated in two ways. First, data can be analyzed to see how similar groups of students perform on a test of the same curriculum area in subsequent years (i.e., evaluating cohort data). For example, results of student assessment in Grade 3 mathematics in one year can be generally compared to results of student assessment in Grade 4 mathematics the next year, and Grade 5 mathematics the next year. Second, data on a particular test can be evaluated over a period of time, to examine if gaps (detected by disaggregation) on one administration of a test tend to close with future administrations of the same test. For example, results of student assessment on a Grade 10 English test can be compared and evaluated for achievement trends for students over a three-year period. The results of this type of analysis (i.e., evaluating historical data) should be interpreted with caution, since the groups of students taking the same test each year are different.

Cohort data are most available at the elementary level, since groups of students tend to matriculate through the grades together. This type of data is not as available for all students at the middle school level (i.e., Grade 8, when students begin to specialize in areas such as mathematics), and is seldom available at the high school level, since there is little continuity among individual classes. Examination of historical data for long-term trends in student achievement can provide information for program evaluation.

District Improvement Plan Update

Target #1

Target # 1of the District Improvement Plan states: "By the opening of the 1999-2000 school year, 80% of elementary, middle and high school students will achieve at least 70% mastery on district criterion-referenced assessments of mathematics, reading, language arts, social sciences, sciences, foreign languages, and vocational subjects."

For the 1996-97 school year, the targets for student achievement were (Table 1):

- Elementary: 74% of the students will achieve the 70% standard.
- Middle: 68% of the students will achieve the 70% standard.
- High: 70% of the students will achieve the 70% standard.

Table 1. Target and Actual Percent of Students Achieving the District Mastery Standard

Year	Elementary (70%)		Middle (70%)		High (70%)	
	Target	Actual	Target	Actual	Target	Actual
1992-93	65	77	47	48	40	34
1993-94	65	79	50	53	40	46
1994-95	68	76	56	56	50	52
1995-96	71	76	62	68	60	53
1996-97	74	76	68	64	70	54
1997-98	77		74		75	
1998-99	80		80		80	

Note: Results are for all students and all areas combined.

This District Improvement Plan target helped staff identify a number of issues regarding the potential usefulness of student assessment information. A district standard of 70% mastery on criterion-referenced tests was established and the percent of students achieving that mastery level is an indicator of program success at the district (or building) level.

Results for all students and all areas combined represent a duplicated count, such that it is possible for all test scores for a single student to be included in the average. While it is possible that including all scores from a high achieving student may increase an average, all scores from a low achieving student may decrease an average. Results for individual curriculum areas are more interpretable, since it is less likely that a single student would take more than a single course in a given area.

Table 2. Percent of Students Achieving the District Mastery Standard by Curriculum Area

	1994-95 Curr. Area Percentages	1994-95 All Students & Areas	1995-96 Curr. Area Percentages	1995-96 All Students & Areas	1996-97 Curr. Area Percentages	1996-97 All Students & Areas
Elementary		76		76		76
Math	70.3		-		70.7	
Reading	86.8		88.8		87.6	
Language Arts	57.2*		61.1*		-	
Science	73.3		74.2		75.2	
Social Science			66.9		66.7	
Middle		56		68		64
Language Arts	65.7		72.2*		71.1	
Reading	71.2		69.3		71.8	
Science	37.2		44.0*		-	
Social Science	86.0*		94.5*		96.3*	
Math	48.9		65.4		49.5	
Foreign Language	47.9		51.1		49.0	
High		52		53		54
English	72.8		77.4		76.7	
Fam. & Cons. Sci.	48.7		59.9		44.0	
Math	33.0		28.4		35.1	
Science	17.4*		45.0		58.9	
Social Science	53.6		52.6		49.4	
Foreign Language	57.5		57.3		59.1	

*Calculations were based on a single course.

Summarizing 1996-97 (Table 2): At the elementary level, greater than 76% of the students achieved the 70% standard in reading. Less than 76% of the students achieved the 70% standard in math, science, and social science. For all tests and students, 76 percent of all scores were above the 70% standard, two percentage points above the target for 1996-97 in the District Improvement Plan.

At the middle school level, greater than 68% of the students achieved the 70% standard in language arts and reading (and a single course in social science). Less than 68% of the students achieved the 70% standard in math and foreign language. For all tests and students, 64 percent of all scores were above the 70% standard, four percentage points below the target for 1996-97 in the District Improvement Plan.

At the high school level, greater than 70% of the students achieved the 70% standard in English. Less than 70% of the students achieved the 70% standard in math, science, social science, foreign language, and family and consumer science. For all tests and students, 54 percent of all scores were above the 70% standard, sixteen percentage points below the target for 1996-97 in the District Improvement Plan.

Building Contributions to District Improvement Plan Target # 1

Tables 3, 4, and 5 show the contribution of each school toward the achievement of District Improvement Plan Target # 1. Scores reflect percentages of students in each content area that scored 70% or better. For example, 78.7 percent of the students tested in reading at Brody Middle School achieved the district's standard of 70%.

The 1996-97 target for the percent of students achieving the district standard was 74 for elementary schools, 68 for middle schools, and 70 for high schools.

Table 3. Percent of students achieving the district mastery standard of 70%.

Middle School	Reading	Math	Language Arts	Foreign Language	Social Science*	Total
Brody	78.7	64.4	75.5	53.4	100.0	72.3
Callanan	85.5	68.6	83.2	66.1	86.7	77.3
Goodrell	67.2	41.9	83.2	93.0	100.0	65.7
Harding	64.7	47.0	65.1	35.7	100.0	58.2
Hiatt	54.6	18.8	55.6	37.9	100.0	47.1
Hoyt	60.2	32.1	62.4	60.9	100.0	46.6
McCombs	68.2	40.5	71.4	NA	100.0	58.3
Meredith	82.0	50.3	64.1	25.0	100.0	64.3
Merrill	83.6	58.9	85.4	33.8	96.0	73.3
Weeks	66.9	49.1	56.4	64.6	100.0	60.0
District	71.8	49.5	71.1	49.0	96.3*	63.7

*Central Academy Government only.

Table 4. Percent of students achieving the district mastery standard of 70%.

High School	Math	Language Arts	Foreign Language	Social Science	Science	Family & Consumer Science	Total
East	27.0	63.7	52.3	37.9	50.7	49.6	44.0
Hoover	43.5	76.6	51.4	52.8	52.3	40.8	54.4
Lincoln	36.8	81.8	76.2	54.5	62.7	39.7	58.7
North	26.9	75.9	47.5	46.1	48.5	46.0	50.6
Roosevelt	38.5	84.9	58.0	54.7	64.1	38.1	58.6
District	35.1	76.7	59.1	49.4	58.9	44.0	53.7

Table 5. Percent of students achieving the district mastery standard of 70%.

Elementary School	Reading	Math	Science	Social Science	Total
Adams	93.0	77.9	76.7	87.0	84.9
Brooks	76.9	57.8	57.9	39.1	58.9
Cattell	83.6	58.7	66.9	61.8	68.5
Douglas	83.0	72.5	72.1	63.1	73.7
Edmunds	80.9	47.1	69.3	47.8	62.0
Findley	NA	78.3	90.3	77.7	81.7
Garton	90.1	67.1	70.9	67.6	75.8
Granger	74.3	62.3	51.9	46.0	60.3
Greenwood	90.7	85.5	85.4	73.4	83.8
Hanawalt	NA	85.4	80.2	81.6	82.4
Hillis	87.4	81.8	79.9	82.7	83.3
Howe	88.7	74.6	84.1	72.9	80.9
Hubbell	88.6	71.0	78.8	73.7	79.0
Jackson	88.0	71.2	72.4	71.0	76.8
Jefferson	94.9	92.4	85.7	85.3	90.5
Longfellow	50.6	53.6	66.2	63.7	57.0
Lovejoy	89.4	82.4	83.3	86.9	86.1
Lucas	NA	77.3	57.7	40.2	59.0
Madison	93.7	70.0	81.0	65.2	79.7
Mann	89.4	68.2	49.3	69.7	73.6
McKee	80.7	68.7	66.6	49.2	67.4
McKinley	86.1	71.9	67.0	45.7	69.5
Mitchell	86.1	66.7	93.2	82.1	82.4
Monore (&Rice)	90.6	67.2	97.3	58.6	77.7
Moore	87.2	71.8	71.4	59.4	68.9
Moulton	75.5	49.8	62.2	47.1	59.9
Oak Park	82.8	60.5	63.9	42.0	64.7
Park Avenue	97.0	87.7	83.7	80.4	88.3
Perkins (& King)	NA	64.2	75.6	56.6	65.7
Phillips	87.0	74.7	78.0	80.7	80.7
Pleasant Hill	88.7	65.7	89.7	84.8	82.6
Stowe	95.6	61.4	88.5	84.1	82.7
Studebaker	88.2	78.6	75.5	78.6	81.3
Wallace	NA	58.9	58.3	29.4	48.8
Watrous	92.1	78.2	83.4	69.7	81.9
Willard	86.1	59.4	61.8	56.0	67.4
Windsor	97.4	86.1	82.3	77.3	86.5
Woodlawn	86.8	64.3	82.3	65.8	74.8
Wright	89.7	66.8	73.2	55.8	73.3
District	87.6	70.7	75.2	66.9	75.7

Note: Some schools had waivers from administering the district reading tests. Other schools elected to pilot the new Scholastic Literacy Place assessments during 1996-97.

District Improvement Plan Update

Target #2

Target # 2 of the District Improvement Plan states: "By the opening of the 1999-2000 school year, 55%, 60%, 65%, and 70% of the students in Grades 3, 5, 8, and 11, respectively, will achieve the competent standard on the district composition assessment." In order to be classified as competent on this assessment, a student must score at least a 6 (out of 10) on the holistic score (the overall impression of the essay), and average at least a 5 (out of 8) on all of the dimensions of writing that are scored. As such, students are required to score better than the mathematical average score to be classified as competent.

For the 1996-97 school year, the targets for student achievement were (Table 6):

- Grade 3: 53% of the students will achieve the competent standard.
- Grade 5: 40% of the students will achieve the competent standard.
- Grade 8: 45% of the students will achieve the competent standard.
- Grade 11: 60% of the students will achieve the competent standard.

Table 6. Target and Actual Percent of Students
Achieving the District Competency Standard
District Composition Assessment

Year	Grade 3		Grade 5		Grade 8		Grade 11	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1991-92		36.4		34.7		35.3		51.9
1992-93		30.9		37.2		40.2		57.3
1993-94		46.8		34.6		44.2		61.9
1994-95		50.6		37.8		43.0		58.3
1995-96		51.3		31.5		48.9		60.5
1996-97	53	45.4	40	33.5	45	45.1	60	60.9
1997-98	54		50		55		65	
1998-99	55		60		65		70	

Summarizing 1996-97 (Table 6): At Grades 3 and 5, the percent of students achieving the competent standard was less than the target. At Grades 8 and 11, the percent of students achieving the competent standard was slightly above the district targets.

Building Contributions to District Improvement Plan Target # 2

Table 7 shows the contribution of each school toward the achievement of District Improvement Plan Target # 2. The scores are the percentages of students in each school that achieved the competent standard on the composition assessment.

Table 7. Percent of students achieving the competent standard on the composition assessment.

Elementary School	Grade 3	Grade 5
Adams	60.0	35.3
Brooks	15.4	24.1
Cattell	50.7	33.3
Douglas	55.6	49.1
Downtown	71.4	40.0
Edmunds	44.9	30.9
Findley	34.7	28.3
Garton	20.0	24.5
Granger	27.4	22.8
Greenwood	65.6	61.3
Hanawalt	76.9	46.6
Hillis	69.8	46.3
Howe	50.0	32.0
Hubbell	50.9	42.4
Jackson	39.7	25.8
Jefferson	53.2	68.8
Longfellow	20.0	21.4
Lovejoy	37.2	30.0
Lucas	23.3	6.8
Madison	53.5	33.3
Mann	43.6	34.3
McKee	52.4	21.2
McKinley	11.1	25.0
Mitchell	57.1	23.5
Monroe	71.0	30.9
Moore	65.0	34.8
Moulton	14.5	10.0
Oak Park	33.8	33.3
Park Avenue	49.2	41.7
Perkins	40.7	39.2
Phillips	42.6	40.0
Pleasant Hill	78.1	26.8
Stowe	40.3	32.0
Studebaker	26.3	26.9
Wallace	42.5	20.0
Watrous	31.3	28.3
Willard	20.4	23.5
Windsor	61.4	36.0
Woodlawn	50.0	33.7
Wright	46.5	21.6

Middle School	Grade 8
Brody	51.5
Callanan	54.2
Goodrell	43.2
Harding	28.1
Hiatt	38.8
Hoyt	47.8
McCombs	33.1
Meredith	47.9
Merrill	64.4
Weeks	39.0

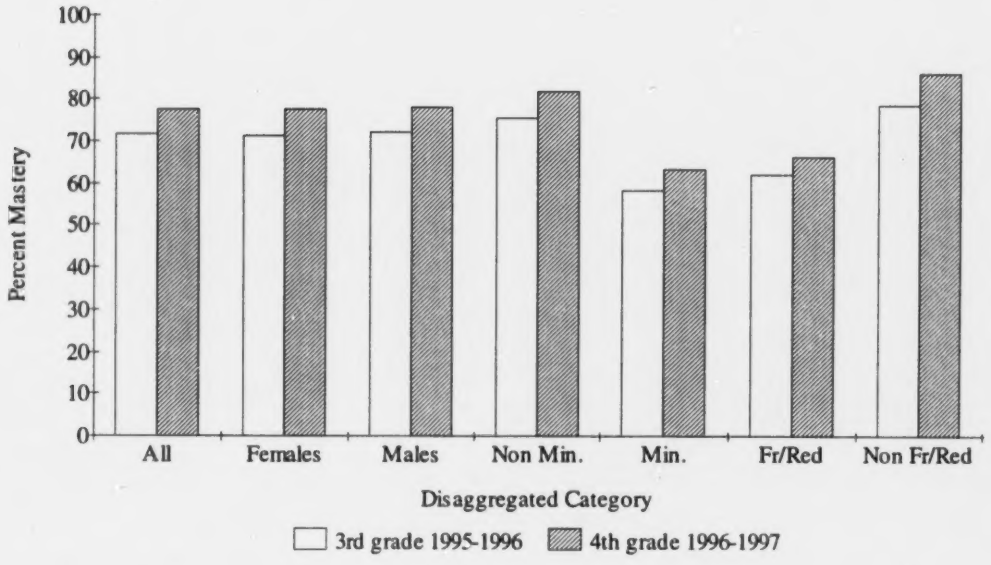
High School	Grade 11
East	51.7
Hoover	54.4
Lincoln	74.5
North	57.1
Roosevelt	63.3
Casady	22.2
Scavo	48.4

Criterion-Referenced Assessment Results

Cohort analysis is used to examine the growth of similar groups of students over time. Figures 1 through 3 are examples of the results of cohort growth analyses for selected subject areas. The table accompanying each figure shows the percent of students in a particular group scoring at or above the 70% standard, as well as the number of students assessed in each group.

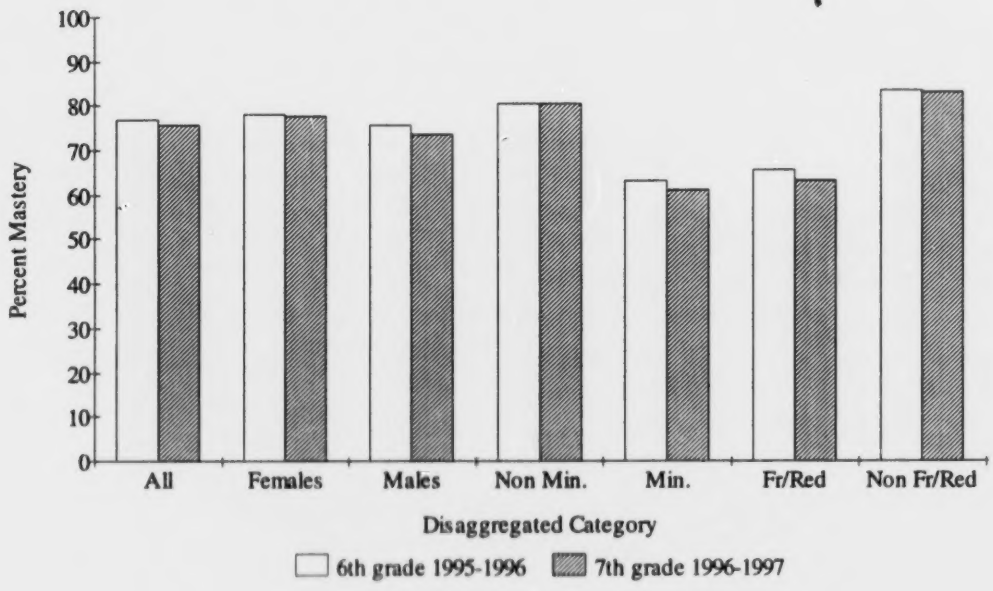
Appendix B contains the results of the historical data analyses for all criterion-referenced, objectives-based tests administered during 1996-97. Appendix C contains the results for all pilot tests administered during 1996-97.

Figure 1. Elementary Social Science:
Cohort of Grade 4 Students in 1996-97



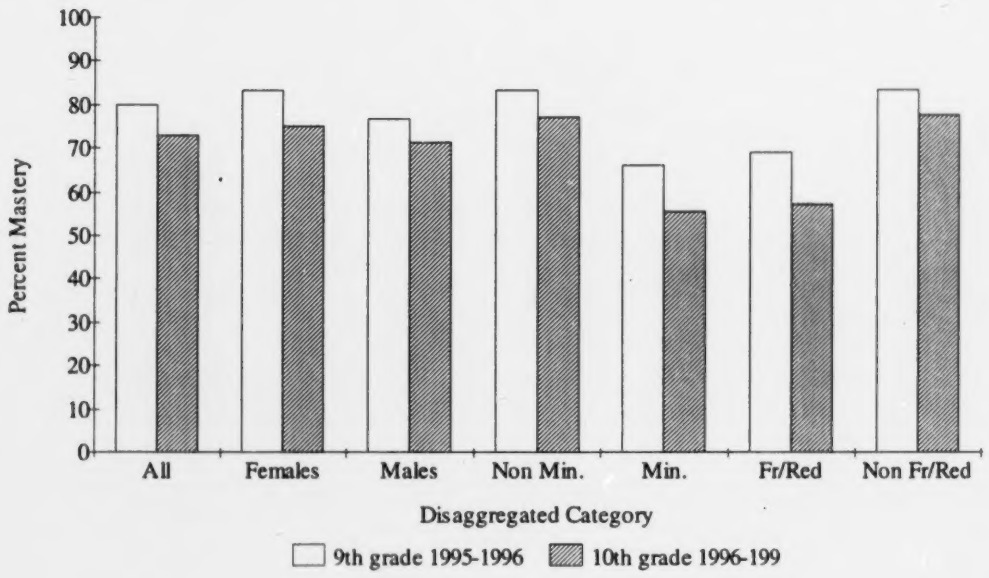
Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Social Science Grade 3	71.8	71.5	72.2	75.7	58.2	61.9	78.4	% ≥ 70%
1995-1996	2012	1002	1010	1569	443	727	1234	N Tested
Social Science Grade 4	77.7	77.5	77.9	81.7	63.1	66.1	86.2	% ≥ 70%
1996-1997	1959	992	967	1533	426	828	1131	N Tested

Figure 2. Middle School Reading:
Cohort of Grade 7 Students in 1996-97



Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
Wind by the Sea Gr. 6, Level 12	77.0	78.0	75.9	80.7	63.0	65.5	83.2	% ≥ 70%
1995-1996	1902	990	912	1502	400	595	1247	N Tested
Star Walk Gr. 7, Level 13	75.8	77.6	73.7	80.5	61.1	63.1	83.0	% ≥ 70%
1996-1997	1506	802	704	1136	370	540	963	N Tested

Figure 3. High School English:
Cohort of Grade 10 Students in 1996-97



Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced	
English 9 1995-1996	79.9	83.0	76.7	83.4	65.9	68.9	83.4	% ≥ 70%
	1634	827	807	1306	328	341	1244	N Tested
English 10 1996-1997	73.1	74.8	71.4	77.2	55.2	57.0	77.3	% ≥ 70%
	1290	658	632	1049	241	256	1026	N Tested

Special Illustration: Elementary Reading Cohort Growth

The Silver-Burdett-Ginn developmental reading curriculum adopted by the district consists of three levels of basal texts at Grade 1, two levels at Grades 2 and 3, and one level each for Grades 4 through 8. Because students in each grade tend to progress at very different rates, they may be reading at a developmental level that is below their actual grade level text. Because of the potential inclusion of upper grade students in *lower-level* reading groups, the analysis of both historical and cohort data becomes more difficult.

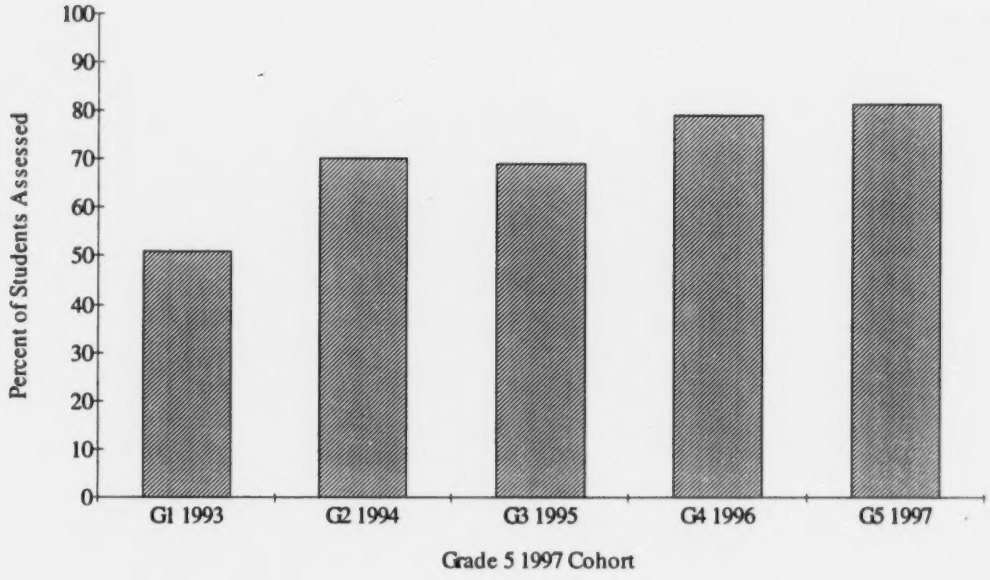
To appropriately evaluate student growth, two issues must be addressed. First, the number of students who are reading (and assessed) at the appropriate end-of-level text for their grade must be examined. Second, the percent of students mastering the end-of-level assessment for their grade must be examined.

The table accompanying Figure 4 shows the number and percent of students at each elementary grade assessed with the appropriate end-of-level test for that grade. In general, more students were reading (and completing, since they were being assessed) at their appropriate end-of-level text in 1997 than in previous years. The figure is a chart of the 1997 Grade 5 Cohort for this information.

The table accompanying Figure 5 shows the percent of students at each elementary grade that achieved the 70% mastery standard on the appropriate end-of-level test for that grade. In general, a greater percentage of students are demonstrating mastery on the appropriate end-of-level tests. The figure is a chart of the 1997 Grade 5 Cohort for this information.

For most groups over time, evidence for effectiveness of the developmental reading program at the elementary level is indicated by: 1) the increasing percent of students completing the appropriate end-of-level text, and 2) the increasing percent of students mastering the appropriate end-of-level test.

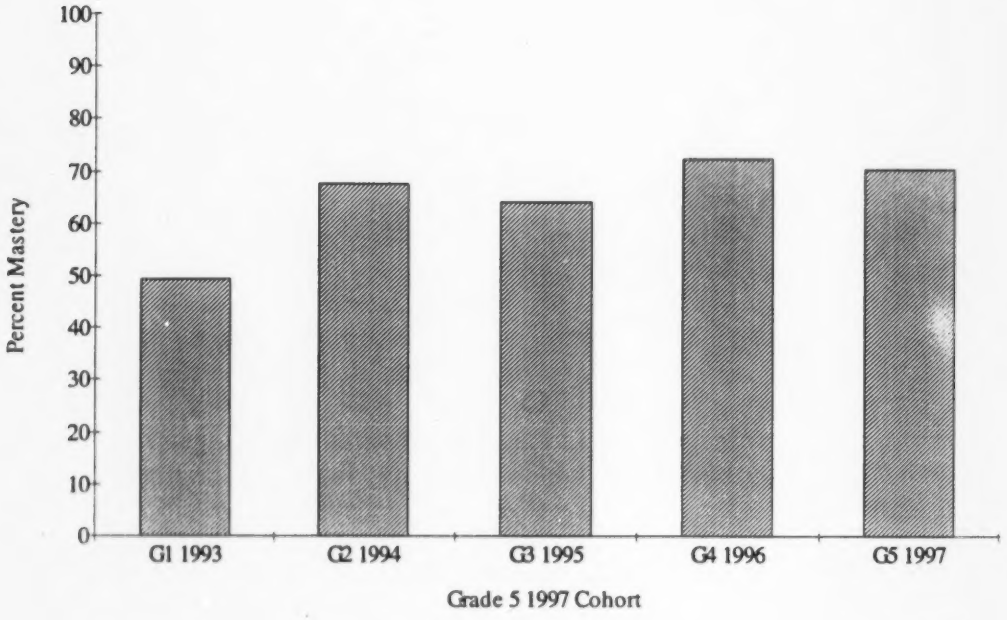
Figure 4. Elementary Reading: Percent of Students Assessed On Grade Level: The 1997 Grade 5 Cohort.



Year	Grade 1 Level 5	Grade 2 Level 7	Grade 3 Level 9	Grade 4 Level 10	Grade 5 Level 11	
Spring 1992	49%	53%	56%	71%	76%	Pct. of Students
	1038	1269	1306	1445	1496	Num. Students
Spring 1993	51%	58%	62%	72%	79%	Pct. of Students
	1144	1354	1335	1541	1617	Num. Students
Spring 1994	38%*	70%	66%	75%	78%	Pct. of Students
	976	1415	1337	1505	1539	Num. Students
Spring 1995	40%	62%	69%	74%	79%	Pct. of Students
	1029	1109	1424	1478	1471	Num. Students
Spring 1996	32%	62%	63%	79%	77%	Pct. of Students
	877	1038	1161	1609	1537	Num. Students
Spring 1997	30%	64%	66%	76%	81%	Pct. of Students
	784	1046	1101	1233	1405	Num. Students

* Estimate based on official student enrollment for Grade 1.

Figure 5. Elementary Reading: Percent of Student Mastery
On Grade Level: The 1997 Grade 5 Cohort



Year	Grade 1 Level 5	Grade 2 Level 7	Grade 3 Level 9	Grade 4 Level 10	Grade 5 Level 11	
Spring 1992	46.2%	51.8%	52.8%	63.7%	65.3%	Pct. Mastery
	1038	1269	1306	1445	1496	Num. Assessed
Spring 1993	49.4%	57.8%	60.6%	65.1%	70.7%	Pct. Mastery
	1144	1354	1335	1541	1617	Num. Assessed
Spring 1994	36.1%*	67.5%	62.0%	69.6%	67.1%	Pct. Mastery
	976	1415	1337	1505	1539	Num. Assessed
Spring 1995	37.0%	59.8%	64.2 %	65.5%	68.6%	Pct. Mastery
	1029	1109	1424	1478	1471	Num. Assessed
Spring 1996	29.5%*	61.0%	59.8%	72.2%	67.8%	Pct. Mastery
	877	1038	1161	1609	1537	Num. Assessed
Spring 1997	28.1%*	62.4%	61.5%	66.9%	70.3%	Pct. Mastery
	784	1046	1101	1233	1405	Num. Assessed

* Estimate based on official student enrollment for Grade 1.

Advanced Placement Scholars

Advanced Placement (AP) tests are criterion-referenced, multiple-choice and free-response (essay or problem solving) tests given to high school students for college credit. The College Board recommends that a score of three or higher (out of five) be achieved in order to receive college credit for a specific course.

For 1996-97, 88 students representing all district high schools (including eleven students from Johnston, North Polk, West Des Moines Valley, Des Moines Christian School, and Van Meter) who attend Central Academy were recognized by The College Board as Advanced Placement Scholars. For the seventh consecutive year, the Governor of Iowa recognized two district students as the Top Male and Top Female Scholars in the State of Iowa.

- **A.P. Scholars**, with a minimum of three AP courses with test scores of 3 or higher, included 42 students.
- **A.P. Scholars with Honor**, with a minimum of four AP courses with test scores of 3 or higher and an average of 3.25, included 18 students.
- **A.P. Scholars with Distinction**, with a minimum of five AP courses with test scores of 3 or higher and an average of 3.5, included 28 students.
- **A.P. National Scholars**, with a minimum of eight AP courses with test scores of 3 or higher and an average of 4 or higher, included 6 students.

Table 8. 1997 Central Academy AP assessments.

Test	Number of Students	Percent Scoring 3 or Higher	Mean Score
European History	75	73	3.09
U.S. History	43	60	3.05
Comparative Government	37	75	3.59
Macro Economics	39	91	3.82
Chemistry	20	80	3.45
Biology	40	94	3.82
Physics (B)	14	78	4.00
Calculus (AB)	54	85	3.07
Calculus (BC)	19	95	3.79
Computer Science	6	66	3.16
Statistics	12	100	4.42
English Literature	50	95	3.72
English Language	95	75	3.42

District Composition Assessment Results

Because of the way in which the district composition assessment is scored, using a national model for scoring performance assessments, an average paper (on a percent scale) will receive a raw score equivalent to a 50%, similar to a 50th percentile ranking on a standardized assessment. Scores from year to year are not expected to significantly change, since readers are retrained each year in the scoring process. Table 9 shows the fall composite score mean percentages for all grades.

Table 9. District Composition Assessment
Composite Score Mean Percentages

Grade	1989	1990	1991	1992	1993	1994	1995	1996
3	60.7	61.9	62.3	60.3	64.9	64.9	65.9	66.3
5	69.6	69.1	68.9	67.3	66.8	68.8	67.7	68.7
8	64.5	64.2	65.1	66.2	66.8	65.5	66.5	65.9
11	68.3	68.8	69.0	70.4	70.7	69.9	69.1	68.0

Based on a Holistic score maximum of 10 points and a score of 8 points for each dimension, to be considered competent, a student must have a Holistic score of 6 or better, and an average of 5 or better for all of the dimensions. Therefore, students must write a "better-than-mathematically-average" paper to be considered competent.

Disaggregated results of the 1996-97 composition assessment, along with results since 1991-92, are shown in Table 10. In general, the percentage of students achieving the "Competent" standard or higher increases over time. A greater percentage of females than males achieved the standard. A greater percentage of nonminorities than minority students, and a greater percentage of students not participating in the subsidized meal program than participants in the subsidized meal program achieved the standard.

The gap between males and females decreased for all cohorts. The gap between nonminority and minority students decreased for the Grade 5 and Grade 8 cohorts, but increased for the Grade 11 cohort. The gap between students based on participation in subsidized meal programs decreased for all cohorts. It is important to note that while the gaps may be closing, a substantial difference continues to exist between groups based on ethnicity and socioeconomic status.

Table 10. District Composition Assessment Trends:
Percent of Students Achieving the "Competent" Standard or Higher

Grade & Year	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Grade 3 1994-95	50.7*	57.5	44.0	54.6	36.2	36.1	61.9
	2348**	1166	1182	1851	497	1017	1331
Grade 5 1996-97	33.5	39.5	27.6	35.7	25.6	23.1	40.8
	2167	1070	1097	1690	477	895	1271
Grade 5 1993-94	34.9	41.4	28.6	39.5	16.0	18.3	46.6
	2143	1059	1084	1724	419	886	1257
Grade 8 1996-97	45.1	50.9	38.6	49.3	29.0	28.1	53.6
	1817	957	860	1441	376	604	1209
Grade 8 1993-94	44.4	51.6	36.6	47.6	31.8	27.6	51.9
	1935	1004	931	1542	393	601	1334
Grade 11 1996-97	60.9	67.2	53.6	65.3	43.3	44.3	64.9
	1529	820	709	1224	305	300	1229

* Percent of students achieving the competency standard or higher
** Number of students in the assessment group

Standardized Assessment Results

The Iowa Tests of Basic Skills (ITBS)

The *Iowa Tests of Basic Skills* is a norm-referenced, standardized test battery developed by the Iowa Testing Programs in Iowa City, Iowa. It is administered in February to district students in Grades 3, 4, 6, and 7. Scores are reported in percentiles, grade equivalents, and normal curve equivalents. Individual building results can be found in Appendix D and Appendix E.

The ITBS tests are designed so that each successive level of the test contains items from the upper half (approximately) of the previous level material. Considering the basic design of the ITBS (or any norm-referenced test), students performing at the 50th percentile are at the expected test and grade level average. For example, fourth grade students scoring at the 50th percentile in February also have a grade equivalent of 4.5.

On tests administered at the same time of year in subsequent years, a student scoring at the 50th percentile in both years has experienced a year's growth. A student scoring at the 50th percentile in 6th grade and at the 60th percentile in 7th grade might be said to have experienced accelerated achievement growth, over and above that which might be normally expected during that period of time.

For the 1997 administration, district students took the reading, language, mathematics, and sources of information subtests. The reading, language, and mathematics subtests comprise the Core Total score.

Elementary School ITBS

Grade 3. The district's national Core Total score on the 3rd grade ITBS was the 55th percentile. Of the district's 39 elementary centers, students at 19 (49%) schools scored at or above the 50th percentile. Students at one of these elementary centers scored above the 80th percentile, and students at ten others equaled or surpassed the 60th percentile point. Students at twenty (51%) of the elementary centers scored below the 50th percentile, with students at five schools scoring below the 40th percentile.

Grade 4. The district's national Core Total score on the 4th grade ITBS was the 55th percentile. Of the district's 39 elementary centers, students 25 (64%) school scored above the 50th percentile. Students at two of these elementary centers scored above the 80th percentile, and students at nine others equaled or surpassed the 60th percentile point. Students at fourteen (36%) of the elementary centers scored below the 50th percentile, with students at six schools scoring below the 50th percentile (Appendix D).

Elementary School Cohort Growth

Grade 3 (1995-96) to Grade 4 (1996-97). For the similar group of students, tested in the third grade in 1996 and in the fourth grade in 1997, the district's national composite score on the ITBS remained stable at the 55th percentile. It should be noted that the group of fourth grade students in 1996-97 are different from the group of third grade students in 1995-96 to the extent that students move into or out of the district.

Of the district's 39 elementary centers, 20 (51%) recorded an increase in Core Total scores varying from 1 to 9 percentile points. Students at eleven of these elementary centers improved by at least 5 percentile points. Scores for two elementary centers' students remained unchanged, with one above and one below the 50th percentile. Scores for students at seventeen elementary centers (44%) dropped between 1 and 10 percentile points (Appendix D).

An analysis of the ITBS subtests for the 1996-97 fourth graders compared to their 1995-96 third grade scores (Table 11) indicates improvement on Reading Total, Language Total scores, and Math Total scores, and no change in Sources of Information Total scores.

Table 11. Elementary School ITBS Subtest Score Comparisons:
Cohort Trend Percentile Ranks
National Student Norms

	Grade 3 1995-96	Grade 4 1996-97
Vocabulary	51	47
Reading Comprehension	55	58
Reading Total	53	54
Spelling	46	50
Capitalization	53	63
Punctuation	58	63
Usage	62	56
Language Total	55	57
Math Concepts	58	54
Math Problem Solving	58	63
Math Total	58	60
Core Total	55	55
Maps & Diagrams	61	65
Reference Materials	56	58
Sources of Information Total	60	60

The Iowa Testing Programs recommends that a more appropriate way (than using percentile ranks) to estimate a student's developmental level, or to gauge year-to-year growth, is to examine grade equivalent scores. The grade equivalent is a (decimal) number that describes a student's location on an achievement continuum. It is relatively easy to understand since it is anchored to the year and month of each grade level in school. For example, a student who takes the ITBS at midyear of seventh grade would be expected to achieve a grade level of 7.5 (seventh year, fifth month).

One common misunderstanding about grade equivalent scores is that they should be used for placement decisions. A third grade student who achieves a grade level of 5.4 in mathematics does not mean that the student should be accelerated in mathematics. In fact, the score provides no information about how that student would normally perform on fifth grade mathematics work. What it does mean, is that the student scored as well as an average fifth grade student in the fourth month of school who took the same test as the third grade student. Grade equivalent scores much higher than a student's actual grade level simply indicate exceptional performance.

Appendix D contains the Grade 3 to Grade 4 group trends using grade equivalent scores. The expected grade equivalents for the third and fourth grade are 3.5 and 4.5, respectively. Any change score that is equal to 1.0 reflects normal (expected) student achievement growth. Any change score that is greater than 1.0 reflects accelerated growth, and any change score less than 1.0 reflects student achievement growth that is less than that which would normally be expected.

As we examine grade equivalent scores, it is particularly interesting to note schools that have students performing at a high level in the first year, and continue to achieve beyond the expected one-year's growth. It is also interesting to note the schools with students achieving below expectations in the first year who are closing the gap in the second year.

Of the district's 39 elementary centers, the average student at 21 (54%) achieved a level of growth that is greater than would normally be expected. Students at seven schools progressed as expected. Students at eleven schools achieved at a rate that is less than would normally be expected. However, students at three of those eleven schools averaged a grade equivalent level that is at or above the expected level of 4.5. Therefore, students at eight schools did not experience achievement growth at the expected level, and achieved a lower than expected level (less than 4.5 for Grade 4).

Middle School ITBS

Grade 6. The district's national Core Total score on the 6th grade ITBS was the 56th percentile. Of the district's 10 middle schools, students at six (60%) schools scored at or above the 50th percentile, and students at four schools surpassed the 60th percentile point. Students at four (40%) of the middle schools scored below the 50th percentile, with students at one school scoring below the 40th percentile.

Grade 7. The district's national Core Total score on the 7th grade ITBS was the 57th percentile. Of the district's 10 middle schools, students at eight (80%) schools scored at or above the 50th percentile, with students at four schools surpassing the 60th percentile point. Students at two (20%) of the middle schools scored below the 50th percentile; one school's average student score fell below the 40th percentile (Appendix E).

Middle School Cohort Growth

Grade 6 (1995-96) to Grade 7 (1996-97). For the similar group of students, tested in the sixth grade in 1996 and in the seventh grade in 1997, the district's national composite score on the ITBS increased from the 56th to the 57th percentile.

Students at four middle schools (40%) recorded increases in Core Total scores varying from 1 to 6 percentile points. Students at three of these middle schools improved by at least 5 percentile points. Students at four middle schools decreased in Core Total scores from 1 to 5 percentile points. Scores of students at two schools remained stable (Appendix E).

An analysis of the ITBS subtests for the 1996-97 seventh graders compared to their 1995-96 sixth grade scores (Table 12) indicates improvement in all areas (Total scores), with the exception of a decrease in Reading Total scores.

Table 12. Middle School ITBS Subtest Score Comparisons:
Cohort Trend Percentile Ranks
National Student Norms

	Grade 6 1995-96	Grade 7 1996-97
Vocabulary	51	49
Reading Comprehension	54	53
Reading Total	54	52
Spelling	54	55
Capitalization	60	59
Punctuation	57	59
Usage	56	57
Language Total	56	58
Math Concepts	58	58
Math Problem Solving	59	59
Math Total	58	59
Core Total	56	57
Maps & Diagrams	60	62
Reference Materials	56	56
Sources of Information Total	57	59

Appendix E contains the Grade 6 to Grade 7 groups trends using grade equivalent scores. The expected grade equivalents for sixth and seventh grade are 6.5 and 7.5, respectively. Of the district's ten middle schools, the average students at six (60%) achieved a level of growth that is greater than would normally be expected. Students at two schools progressed as expected. Students at two schools achieved at a rate that is less than would normally be expected. However, students at one of these two schools averaged a grade equivalent level that exceeds the expected level of 7.5 Therefore, students at one school did not experience achievement growth at the expected level, and achieved at a lower than expected level (less than 7.5 for Grade 7).

Disaggregated ITBS Scores

Disaggregated ITBS information allows an examination of the percent of students in a particular grade and group scoring at or above a grade level standard. Table 13 shows the percent of students scoring on grade level (50th percentile) or higher on the ITBS (Core Total).

Table 13. Percent of Students Scoring On Grade Level
(50th Percentile) or Higher
ITBS Core Total Scores
National Student Norms
Trend Results

Grade	All Students	Males	Females	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Grade 3 1995-96	51.9	54.5	49.2	57.3	32.7	36.6	60.9
Grade 4 1996-97	51.7	53.3	50.1	57.0	34.0	35.1	63.6
Grade 6 1995-96	55.6	55.8	55.5	60.8	37.1	38.1	64.8
Grade 7 1996-97	57.5	57.6	57.4	63.2	37.7	38.0	68.2

Overall, more than half of the students scored at or above grade level on the ITBS. Gender differences in achievement are small at elementary and are minimal at middle school. There are substantial differences between non-minority and minority students, and between students receiving subsidized meals and those not receiving subsidized meals. The gap between minority and non-minority students seems to decrease slightly from Grade 3 to Grade 4, but widens again from Grade 6 to Grade 7. The gap between students receiving subsidized means and those not receiving subsidized meals widens at both elementary and middle school levels. The achievement gap for both of these groups was slightly greater when the data were disaggregated by socioeconomic rather than ethnic status.

Appendix F shows the percent of students scoring at or above grade level on each strand of the ITBS (Core, Reading, Language, Math, and Sources of Information) by building for all students combined.

Score Distributions for the ITBS

The convenience of ITBS percentile scores makes it very easy to set a standard of expectation that students will achieve on grade level. As this is done, it is important to understand some of the characteristics about bell-shaped curves (i.e., normal distributions).

For example, by eliminating the students who actually score at the 50th percentile on the ITBS, all remaining students are either scoring above or below grade level. That distance from the 50th percentile point is indicative of how far above or below grade level a student is actually achieving. The acceptability of a student's percentile score in reference to the 50th percentile point becomes largely subjective.

Statisticians have examined many properties of these bell-shaped or "normal" curves. Instead of establishing cutoff points for acceptability, they establish ranges of acceptability. As such, part of the interpretation of any normal curve is that there is a distance from the midpoint that is generally accepted as being within the range of normalcy. In the case of the ITBS, then, there is likely a range within which a student would be considered "normally developing."

Such a generally acceptable range would include approximately 68% of the students. As such, since the ITBS is a norm-referenced test, that is, the students scores tend to form a bell-shaped curve, then "normalcy" would be defined as being within the 34 percentile points below and 34 percentile points above the midpoint of 50. This translates to a student's score falling between the 16th percentile and 83rd percentile.

Table 14 shows the percent of district students over the past two years who fell below, within, and above this range of "normal" achievement. The percentages in this table indicate that there are fewer students in the "below" category and more students in the "above" category than would normally be expected. The percent of students tested also is an indication that we have included some students from groups for which the norms were not developed, and who may be disadvantaged by such an assessment. These may include, but may not be limited to, students in special education resource rooms or non-native English speaking students.

Table 14. Percent of district students below, within, and above range of "normal" achievement. ITBS Core Total scores.

Grade & Year	Below	Within	Above	% of Students enrolled who were tested
EXPECTED Percentages	16%	68%	16%	
Grade 3 1995-96	11.5	70.6	17.9	81.3
Grade 4 1995-96	9.0	69.3	21.6	89.8
Grade 6 1995-96	11.7	68.9	19.4	76.9
Grade 7 1995-96	10.2	70.4	19.4	81.4
Grade 3 1996-97	13.2	69.7	17.0	82.3
Grade 4 1996-97	10.7	69.5	19.8	82.8
Grade 6 1996-97	11.9	71.0	17.2	74.4
Grade 7 1996-97	10.8	68.3	20.9	75.7

Another way to evaluate the distributions of scores is to examine the percent of students who are achieving in a grade-equivalent range. This would tell us the percent of students who are scoring a certain distance from "grade level." Table 15 shows the percent of district students over the past two years who achieved within various ranges from being "on grade level." The table contains the actual percentages of students, contrasted against the percentages that would be expected for each grade level. This information answers the following questions:

- What percent of students scored more than one and one-half grade levels below average?
- What percent of students scored more than one grade level below the average?
- What percent of students scored within one grade level below or above the average?
- What percent of students scored more than one grade level above the average?
- What percent of students scored more than one and one-half grade levels above the average?

Table 15. Percent of students scoring within specified ranges.
ITBS Core Total Scores.

Grade & Year	1.5 Grade Levels or More Below	1 Grade Level or More Below	Within 1 Grade Level Below or Above	1 Grade Level or More Above	1.5 Grade Levels or More Above
EXPECTED Percentage	8	18	60	22	13
Grade 3 1995-96	5.3 %	13.6 %	61.7 %	24.7 %	14.0 %
Grade 3 1996-97	5.6 %	15.7 %	62.0 %	22.3 %	13.9 %
EXPECTED Percentage	13	26	44	30	20
Grade 4 1995-96	7.5 %	17.6 %	44.6 %	37.8 %	26.8 %
Grade 4 1996-97	8.6 %	19.7 %	47.5 %	32.8 %	23.9 %
EXPECTED Percentage	27	34	29	37	31
Grade 6 1995-96	21.9 %	28.4 %	29.6 %	42.1 %	35.8 %
Grade 6 1996-97	22.0 %	29.1 %	31.5 %	39.5 %	32.8 %
EXPECTED Percentage	30	37	25	38	33
Grade 7 1995-96	23.2 %	29.0 %	26.3 %	44.6 %	39.1 %
Grade 7 1996-97	22.9 %	30.5 %	25.9 %	43.6 %	38.3 %

These results indicate that while the percent of students scoring below grade level is increasing, the percentages are lower than that which would be expected in a normal population of students, and for a specific grade level. Also, the percent of students scoring above grade level increases across the grades, and remains higher than that which would be expected in a normal population of students.

PLAN Assessment

The PLAN is an assessment tool developed by the American College Testing (ACT) Program. It measures basic academic development in English, mathematics, reading, and science reasoning. PLAN helps identify career interests and relates these to educational and training requirements. It measures knowledge of effective study skills and gives students the opportunity to indicate areas of concern in which they feel they need assistance. PLAN can also assist students in preparing for the ACT.

Tables 16, 17, and 18 show district scores for the PLAN tests, study skills analysis, and student needs analysis. When reporting PLAN results, ACT reports the percent of students scoring at or below a certain point. This is different from a percentile score, which is the score point below which a certain percent of scores lie. For example, the average 10th grade student scored as well or better than 60 percent of all students who took the PLAN assessment. These same students, on average, scored as well or better than 53 percent of college-bound students.

Table 16. PLAN Subtest Scores

	National Percent at or Below (10th grade Students):		
Tests	All Students	College-Bound	# Students
English	55	48	911
Usage/Mechanics	59	53	911
Rhetorical Skills	56	49	911
Mathematics	64	58	910
Pre-Algebra/Algebra	62	55	910
Geometry	67	63	910
Reading	58	52	906
Science Reasoning	63	57	900
Composite (Average)	60	53	897

Table 17. PLAN Study Skills Analysis

Skill Areas	National Percent at or Below (10th grade Students):	# Students
Managing Time & Environment	56	907
Reading Textbooks	47	907
Taking Class Notes	46	906
Using Resources	45	898
Preparing for Tests	43	890
Taking Tests	46	884
Total	39	907

Note: Scores of "0" were eliminated from the analysis.

Table 18. PLAN Student Needs Analysis

Area of Need	Amount of Help Needed (Percent Responding) A Lot	Some	A Little/ None	# Students
Expressing my ideas in writing	6.3	38.0	55.7	892
Developing my public speaking skills	25.0	48.1	26.9	892
Increasing my reading speed	18.5	36.4	45.1	891
Increasing my understanding of what I read	14.0	42.1	43.9	891
Developing my math skills	24.5	40.7	34.8	891
Developing my study skills and study habits	24.4	49.7	26.0	890
Developing my test-taking skills	23.0	47.9	29.1	891
Understanding and using computers	18.5	40.7	40.8	890
Choosing a college or technical school to attend after high school	29.7	44.0	26.3	890
Selecting a career/job that is right for me	24.3	42.9	32.7	883

Note: Scores of "0" were eliminated from the analysis.

Table 19 shows the academic results for the 1996-97 PLAN assessment by building. Results received from ACT for the PLAN include estimated ACT scores, if the student would be continuing with a constant growth pattern until the ACT were taken. Estimated ACT scores are in the form of a range from low estimated ACT score to high estimated ACT score. These are also listed in Table 19 as averages for those students tested.

Table 19. PLAN Subtest Scores by Building
National Percent at or Below: All Students

	East	Hoover	Lincoln	North	Roosevelt
Number of Students	62	226	406	156	62
English	60	54	57	46	61
Usage/Mechanics	60	57	62	48	63
Rhetorical Skills	67	55	58	49	64
Mathematics	60	62	67	52	70
Pre-Algebra/Algebra	57	61	68	51	70
Geometry	65	67	70	61	71
Reading	64	60	58	52	68
Science Reasoning	66	61	64	62	77
Composite (Average)	64	60	62	52	70
Low Estimated ACT Score	17.5	17.4	17.5	16.5	18.4
High Estimated ACT Score	21.2	21.0	21.0	20.0	22.1

ACT Assessment

The district's college-bound students maintained comparable scores in their mean performance on the ACT. Eight hundred forty-two students (52%) from the Class of 1997 took the ACT. The mean score for this group was 20.9 (out of 36), compared to 21.0 in 1995 and 1996. The national mean for this class was 21.0 and the Iowa mean was 22.1. Table 20 shows disaggregated ACT scores.

Table 20. ACT Composite Score Comparisons (Means)
Disaggregated by Ethnic Group

	Year	Number of Students	Des Moines	Iowa	National
All Students	1992	769	21.1	21.6	20.6
	1993	815	20.8	21.8	20.7
	1994	779	21.1	21.9	20.8
	1995	859	21.0	21.8	20.8
	1996	853	21.0	21.9	20.9
	1997	842	20.9	22.1	21.0
African American	1992	69	17.6	17.9	17.0
	1993	59	17.2	18.4	17.1
	1994	71	19.1	19.1	17.0
	1995	68	18.3	18.7	17.1
	1996	73	17.7	17.8	17.0
	1997	49	16.3	18.1	17.1
American Indian	1992	4	20.3	19.2	18.1
	1993	3	21.0	19.1	18.4
	1994	2	17.5	19.1	18.5
	1995	4	20.8	19.5	18.6
	1996	4	20.0	20.1	18.8
	1997	9	19.9	20.2	19.0
White	1992	592	21.8	21.8	21.3
	1993	629	21.5	21.9	21.4
	1994	569	21.8	22.0	21.4
	1995	611	21.6	21.9	21.5
	1996	598	21.6	22.0	21.6
	1997	592	21.6	22.2	21.7
Hispanic	1992	16	19.6	20.2	18.7
	1993	10	19.0	20.1	18.8
	1994	16	18.8	20.3	18.7
	1995	19	18.9	20.0	18.6
	1996	25	18.8	20.6	18.8
	1997	11	19.8	20.5	18.9
Asian	1992	52	19.3	21.1	21.6
	1993	60	17.1	21.3	21.7
	1994	59	18.1	21.1	21.7
	1995	78	18.7	21.2	21.6
	1996	66	19.0	21.3	21.6
	1997	78	18.1	20.9	21.7

Scholastic Achievement Tests (SAT)

Typically, only those Des Moines students who are seeking entry into the most prestigious universities and colleges in the country take the SAT. District students continued to score well above the national average in their mean performance on the SAT.

In 1996-97, 146 students took the SAT. For all students, the SAT-Verbal mean score was 564 out of 800, and the SAT-Math mean score was 555 out of 800. The Verbal mean score for males was 556 and for females was 571; the Math mean score for males was 575 and for females was 537. Table 21 compares Des Moines students' scores with national averages.

Table 21. SAT Composite Score Comparisons (Means)
Disaggregated by Gender

	Des Moines				National			
Year	1994 (n=124)	1995 (n=137)	1996 (n=108)	1997 (n=146)	1994	1995	1996	1997
SAT-Verbal								
All students	488	511	601	564	423	428	505	505
Males	500	529	613	556	425	429	507	507
Females	474	499	587	571	421	426	503	503
SAT-Math								
All students	547	585	609	555	479	482	508	511
Males	581	629	640	575	501	503	527	530
Females	508	553	571	537	460	463	492	494

Dissemination of Assessment Information to Buildings

Assessment results are returned to buildings in various formats throughout the year. Tests that are scanned in the buildings can yield immediate results including percentage correct for total scores and individual items. This can be done for district tests as well as teacher-made tests that utilize scanable forms.

During August 1997, the following activities were achieved:

- Prior to the beginning of school, principals receive Test Administration Report Profiles (TARPs). Reports for each test are sorted by teacher and classroom, and list student total scores and strand scores. Building principals receive two copies of each report: an office copy, and one for distribution to teachers.

- Principals received copies of test graphs for all criterion-referenced tests. These can be used for making comparisons of school average scores with the district averages.

- Each elementary principal received a data disk containing all district-level assessment results for all students in their school. The data included results for all criterion-referenced tests, the district's composition assessment, and ITBS. The results were in a database format, so principals or teachers could sort on the student's name, the test name, or a grade, and be able to generate their own summary information if they chose. Some schools are adding their own elements to the database, and some are creating reports to distribute to parents. Even as a stand-alone file, school staff can improve efficiency by using this consolidated test information file.

- Each middle school principal received a data disk containing all district-level assessment results for all fifth grade students in the district. To eliminate the need for middle schools to contact their elementary feeder schools to find information on students in their buildings, they need only to look up the data on their disk. This should facilitate student placement and scheduling into courses.

Prior to spring conferences, each elementary school received individual student reports for the district composition assessment for students in Grades 3 and 5. The intent was that teachers could use the reports during conferences. Grade 11 English teachers received the same report in an electronic template format, with which they could merge the data for each of their students and generate a paper copy report.

Each student taking an ITBS test received a Profile Narrative Report of scores, along with a narrative of what those scores mean. The reports, generated by the Iowa Testing Program's scoring service, are purchased from the district's testing budget. The Board of Directors received a summary of results of the ITBS and PLAN assessment (97-164) in June 1997.

Each student taking a PLAN assessment received an individualized report from ACT, containing individual and comparative information, along with a planning guide on how to interpret scores and plan for the future.

Content area supervisors provide assessment information in different forms and in different forums for their teachers. Utilizing their copies of reports, along with results of customized analyses, or additional analyses they do themselves, supervisors generate additional information for teacher use in improving instruction. Sessions are held during fall and spring in-service, and at other times throughout the year.

Assessment information specific to each school is provided in the school information bases, which are distributed annually to each school. Assessment data in the school information bases are disaggregated by gender, ethnicity, and socioeconomic status. Additional miscellaneous reports regarding student assessment information are provided to subject-area supervisors and to schools, based on specific needs and requests.

Plans for the future include adding to the dissemination for schools. It is planned that:

- Each middle school will get a database of all of their student assessment results on disk.
- Each middle school will receive electronic or paper copies of their composition assessment results.
- Each high school will get a database of all of their student assessment results on disk.
- Each high school will get a database of all Grade 8 student assessment results on disk.

Summary and Conclusions

The aggregate of information from the multiple methods of assessment in the various curricular areas, along with standardized assessment information, indicates that district students are indeed achieving. In an urban center, where schools are a microcosm of society, the complexities of life make learning an ongoing challenge. In situations where student mobility rates and socioeconomic indicators create a less than satisfactory learning environment, the district has implemented programs to provide students the opportunity to achieve at higher levels.

Groups have convened to address a number of issues related to improving academic success for all students. These include, but are not limited to:

- School-to-work committees focusing on essential learnings and workplace readiness.
- Eight Curriculum Audit Task Forces addressing issues identified in the Curriculum Management Audit Report, including Assessment and Evaluation.
- Committees focusing on assessment of special populations (e.g., special education students; ESL).
- Committees focusing on achievement of minority students.
- School improvement teams focusing on in depth analyses of their own data.

With the development of each new test, staff consider the possibility of more frequent assessment of students. Not only does this relieve the burden on teachers and students of a comprehensive examination at the end of a course, but it also allows students to respond to more items that cover a limited subset of objectives, providing a better opportunity to demonstrate subject matter mastery. It also provides immediate feedback for teachers and students, so that additional activities can be provided to address learning deficiencies.

Criterion-referenced assessment is only a part of the assessment of students that occurs in the district's classrooms each day throughout the year. Improving the existing assessment system is a continuous effort. As the district's tests become focused on identified critical objectives (as opposed to content coverage), results used for school improvement activities will become more meaningful for school staffs.

One issue related to all of the assessment is the achievement gap between disaggregated groups. While gender differences, for the most part, are small, the differences based on ethnicity are significant, as are the differences between groups based on a socioeconomic indicator.

Focusing on student achievement gaps at the individual school level might resolve some issues at a specific site. However, the effect from a district perspective, without a focused effort, will certainly be diffused.

Most of the issues mentioned continue to be addressed on a daily basis. The complex nature of teaching-for-learning requires appropriate information for instructional planning and decision-making. While it seems that most of the students in the Des Moines Public Schools are indeed achieving, it is apparent that some are not. Through cooperative efforts, the school district and the community will continue to provide opportunities for all students to achieve.

DEFINITIONS

Criterion-Referenced Test - a test that has been assigned a criterion score or percent that is in the definition of mastery or success. If a standard of achievement is not specified, these are often referred to as objectives-based tests.

Grade Equivalent - the grade level for which a score is the real or estimated average. For example, 4.2 represents the fourth year, second month.

Iowa Tests of Basic Skills (ITBS) - a norm-referenced test published by the Iowa Testing Programs in Iowa City, Iowa. It is administered in Grades 3, 4, 6, and 7 in the Des Moines Public Schools. The test consists of the following parts:

> Grades 3, 4, 6, & 7: Vocabulary, reading spelling, capitalization, punctuation, usage, visual material, references, math concepts, math problems, and math computation.

ITBS scores are reported in percentiles, grade equivalents, and normal curve equivalents.

Mastery Metric - a pre-specified standard that students must achieve in order to demonstrate competence of the subject matter. This mastery standard does not compare students with each other, but with an external standard defined by the objectives of a course and the requirements for demonstrating competence. Thus, all students have an opportunity to demonstrate mastery of subject matter.

Normal Curve Equivalent - an interval scale equivalent of the bell-shaped curve. The conversion process to arrive at an NCE distribution transforms the shape of the bell-shaped curve into a rectangular shape, such that the scores are distributed equally across each point in the distribution.

Norm-Referenced Test - a test that interprets individual performance by comparing a student's score to a previously established norm group, not to a performance criterion. The test is designed for one-half of the students to be above the 50th percentile and one-half below.

Objectives-Based Test - a test designed to measure one or more instructional objectives, usually the critical skills being taught by an educational program.

Percent - the proportion of a total. In testing, it is the number of questions answered correctly divided by the total number of items on the test.

Percentile - a point in the distribution below which a certain percent of the scores fall. For example, the 80th percentile is the point below which 80 percent of the scores lie. The shape of the distribution of percentiles is a bell-shaped curve.

Performance-based Assessment - an assessment in which the task is the skill that students are asked to perform, such as the demonstration of writing proficiency.

School Norms - Show where a school building or school system average for each grade group ranks among other averages of similar grade groups. It indicates specifically where the average score ranks among the averages of other schools (Iowa Testing Programs).

Significance - an association between two variables or among a group of variables is said to be statistically significant when [quantitatively] the association fulfills specific predetermined criteria. Statistical significance is largely a function of sample size, and must be weighed against a "meaningfulness" criterion. In addition to or in the absence of statistical significance, results judged as having educational or practical meaning may play an important role in the evaluation of outcomes, and in some cases, may be more valid than statistical significance.

Student Norms - Show where the average student ranks among other students in the same grade. It should be interpreted as the rank of the average student among the students (Iowa Testing Programs).

Note on Free/Reduced price meals:
Results of disaggregation for all assessments were provided by the Department of Food & Nutrition Management. School Improvement staff provided the raw data files to be matched with the CAFS (Computer Assisted Food Serivice) system files to determine the appropriate percentages. Gaining access to these data within the limits of the law has taken about two years to accomplish. After a failed attempt to manipulate data files within database programs, the last resort was to enlist the assistance of a programmer from CAFS, who created the program template to access the data. While this provides access to summary data regarding socioeconomic status, it doubles the amount of file manipulation that must occur to prepare the files to be read by the CAFS program.

Percent of students on free or reduced price meals was determined by combining the number of students on free and on reduced, and dividing by the average daily membership for that grade.

District Criterion-Referenced, Objectives-Based Tests:
Historical Disaggregated Data

The tables in this appendix (and in Appendix D) show:

1) The percent of students in a category that scored at or above the district criterion of 70% on the end-of-course test, and
2) The total number of students in a category that took the test.

Example: Elementary Mathematics: Math 2:

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 2	83.8	83.5	84.2	87.1	69.5	73.4	90.9
1991-1992	2377	1179	1198	1941	436	954	1422

On this test,
83.8% of all 2,377 second grade students tested scored a 70% or better.
83.5% of 1,179 second grade females scored a 70% or better.
84.2% of 1,198 second grade males scored a 70% or better.
87.1% of 1,941 second grade non-minority students scored a 70% or better.
69.5% of 436 second grade minority students scored a 70% or better.
73.4% of 954 second grade students receiving free or reduced price meals scored a 70% or better.
90.9% of 1,422 second grade students not receiving free or reduced price meals scored a 70% or better.

The following tests were given at the end of each semester:
All Math tests for Grades 2 through 8; Geometry; Algebra II
Social Science for Grades 3, 4, and 5 is generally given at the end of the instruction.
English 10
All High School Social Science tests
All Family & Consumer Science tests

All reading tests for elementary students were given at the time that a student completed a particular book in the series. Results represent each student's final end-of-book test for the year (unduplicated count). All reading tests for middle school were administered at the end of the school year. If students progress at an appropriate pace, they should be able to complete Level 5 during Grade 1, Levels 6 and 7 during Grade 2, Levels 8 and 9 during Grade 3, and Levels 10 through fourteen in Grades 4 through 8 (one level each year).

All Science tests are now modular, such that the test for a module is given at the end of instruction, rather than a comprehensive test at the end of the year. This is done for all science courses from Grade 3 through high school.

The remaining tests were administered at the end of the school year:
Middle School Reading
All Language Arts (except Grade 10)
All French & Spanish

Table B1. Reading: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
A New Day Level 5 1991-1992	89.7 1537	89.9 805	89.3 732	90.1 298	87.4 239	84.8 545	92.3 991
A New Day Level 5 1992-1993	91.9 1492	93.2 737	90.6 755	93.1 1231	86.2 261	87.2 579	94.9 913
A New Day Level 5 1993-1994	90.0 1295	90.5 681	89.6 614	90.2 1068	89.4 227	82.3 469	94.4 826
A New Day Level 5 1994-1995	86.8 1409	88.4 689	85.3 720	89.5 1090	77.4 319	80.7 592	91.2 817
A New Day Level 5 1995-1996	87.1 1219	88.4 620	85.8 599	89.7 957	77.9 262	81.5 383	89.8 786
A New Day Level 5 1996-1997	90.4 1073	91.5 551	89.3 522	90.1 852	91.4 221	86.9 449	92.9 620
Garden Gates Level 6 1991-1992	76.5 620	78.8 288	74.4 332	76.2 463	77.1 157	68.9 286	82.9 334
Garden Gates Level 6 1992-1993	78.7 577	78.1 270	79.2 307	80.2 419	74.7 158	76.4 343	82.1 234
Garden Gates Level 6 1993-1994	77.1 528	71.8 227	81.1 301	81.0 399	65.1 129	74.5 290	80.3 238
Garden Gates Level 6 1994-1995	78.9 551	79.7 261	78.3 290	82.4 403	69.6 148	75.7 329	83.8 222
Garden Gates Level 6 1995-1996	84.0 520	83.8 240	84.3 280	87.6 380	74.3 140	75.5 204	90.5 283
Garden Gates Level 6 1996-1997	83.8 402	82.6 201	85.1 201	85.7 286	79.3 116	81.5 200	87.5 192

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Going Places Level 7	93.4	94.2	92.5	94.7	87.3	89.1	95.8
1991-1992	1634	829	805	1350	284	599	1033
Going Places Level 7	95.3	95.5	95.2	96.2	91.2	93.2	96.7
1992-1993	1651	866	785	1378	273	628	1023
Going Places Level 7	95.3	96.1	94.6	96.3	90.9	92.2	97.4
1993-1994	1740	890	850	1423	317	689	1051
Going Places Level 7	93.7	94.5	92.8	94.8	89.6	89.8	96.5
1994-1995	1420	763	657	1122	298	591	829
Going Places Level 7	96.0	97.1	94.9	96.6	94.0	94.6	96.7
1995-1996	1308	658	650	1008	300	445	808
Going Places Level 7	95.0	96.1	94.1	95.9	91.7	93.3	96.0
1996-1997	1250	608	642	986	264	466	781
Castles of Sand Level 8	75.1	77.7	72.9	78.3	65.4	70.8	78.7
1991-1992	714	327	387	535	179	332	381
Castles of Sand Level 8	73.4	75.2	72.0	72.6	76.0	71.5	75.8
1992-1993	504	218	286	379	125	277	227
Castles of Sand Level 8	71.4	76.6	67.5	73.9	64.5	68.2	75.9
1993-1994	405	171	234	295	110	239	166
Castles of Sand Level 8	73.9	74.5	73.4	76.5	67.3	69.8	80.5
1994-1995	528	231	297	378	150	328	200
Castles of Sand Level 8	76.4	75.0	77.6	79.0	69.4	74.1	79.6
1995-1996	453	212	241	329	124	193	235
Castles of Sand Level 8	66.4	68.1	64.7	68.5	62.1	65.5	67.5
1996-1997	453	232	221	308	145	249	203

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
On the Horizon Level 9 1991-1992	90.3 1761	91.2 885	89.4 876	91.7 1466	83.4 295	85.3 631	93.2 1127
On the Horizon Level 9 1992-1993	89.9 1745	91.6 867	88.2 878	91.4 1438	82.7 307	84.2 652	93.2 1093
On the Horizon Level 9 1993-1994	88.8 1701	90.4 883	87.0 818	90.7 1402	79.6 299	83.2 641	92.2 1060
On the Horizon Level 9 1994-1995	88.9 1872	89.4 959	88.5 913	91.3 1523	78.5 349	83.8 729	92.2 1143
On the Horizon Level 9 1995-1996	91.0 1487	92.1 785	89.7 702	92.0 1188	87.0 299	89.3 477	92.1 971
On the Horizon Level 9 1996-1997	90.2 1410	91.8 711	88.6 699	91.5 1111	85.3 299	87.8 581	91.8 822
Silver Secrets Level 10 1991-1992	84 1765	84.5 894	83.6 871	85.1 1468	78.8 297	75.4 629	88.9 1131
Silver Secrets Level 10 1992-1993	84.1 1853	85.2 918	83.1 935	87.0 1502	71.8 351	73.8 706	90.5 1147
Silver Secrets Level 10 1993-1994	87.2 1822	88.0 920	86.4 902	88.9 1475	79.8 347	80.3 701	91.5 1121
Silver Secrets Level 10 1994-1995	85.1 1734	88.0 875	82.2 859	87.2 1397	76.6 337	78.5 671	89.3 1063
Silver Secrets Level 10 1995-1996	88.3 1921	88.7 958	87.9 963	90.4 1537	79.9 384	84.2 626	91.3 1233
Silver Secrets Level 10 1996-1997	84.9 1469	85.7 756	84.0 713	86.9 1180	76.5 289	78.9 564	88.6 903

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Dream Chasers Level 11	85.5	87.3	83.5	87.4	75.1	79	88.6
1991-1992	1507	774	733	1274	233	482	1023
Dream Chasers Level 11	88.7	90.5	86.7	90.6	79.5	83.2	91.7
1992-1993	1618	853	765	1340	278	570	1048
Dream Chasers Level 11	86.4	86.0	86.9	88.7	74.7	79.0	90.4
1993-1994	1547	794	753	1294	253	544	1003
Dream Chasers Level 11	87.2	86.8	87.6	89.0	79.0	77.3	92.1
1994-1995	1471	756	715	1199	272	493	978
Dream Chasers Level 11	87.4	88.2	86.5	90.6	74.0	82.0	89.9
1995-1996	1551	789	762	1251	300	449	1059
Dream Chasers Level 11	87.1	88.8	85.3	88.1	82.0	79.6	91.1
1996-1997	1425	724	701	1197	228	485	937

Table B2. Reading: Middle

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Wind by the Sea Level 12	66.1	70.1	61.7	71.5	43.3	48.4	74.3
1991-1992	1642	850	792	1328	314	519	1123
Wind by the Sea Level 12	75.6	76.7	74.5	78.9	61.0	61.2	84.0
1992-1993	1952	983	969	1590	362	720	1232
Wind by the Sea Level 12	75.6	79.5	71.4	79.0	61.5	63.0	83.0
1993-1994	1964	1014	950	1574	390	732	1232
Wind by the Sea Level 12	76.1	78.1	74.1	79.6	62.1	62.6	84.9
1994-1995	1996	1012	984	1595	401	789	1207
Wind by the Sea Level 12	77.0	78.0	75.9	80.7	63.0	65.5	83.2
1995-1996	1902	990	912	1502	400	595	1247
Wind by the Sea Level 12	76.1	78.5	73.7	79.9	64.3	66.1	83.3
1996-1997	1651	854	797	1253	398	681	969

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Star Walk Level 13 1991-1992	59.3 1435	63.4 718	55.2 717	63.2 1180	41.2 255	40.5 407	66.7 1028
Star Walk Level 13 1992-1993	74.4 2029	77.7 1051	70.9 978	77.3 1630	62.7 399	59.2 679	82.1 1350
Star Walk Level 13 1993-1994	73.2 1864	75.2 930	71.2 934	77.0 1507	56.9 357	56.4 626	81.7 1238
Star Walk Level 13 1994-1995	73.8 1839	76.9 978	70.3 861	79.5 1442	53.1 397	61.7 686	81.0 1153
Star Walk Level 13 1995-1996	71.2 1661	73.9 862	68.2 799	75.5 1315	54.6 346	61.5 483	75.7 1129
Star Walk Level 13 1996-1997	75.8 1506	77.6 802	73.7 704	80.5 1136	61.1 370	63.1 540	83.0 963
Worlds Beyond Level 14 1991-1992	50.7 647	56.5 317	45.2 330	52.8 506	43.3 141	40.3 186	54.9 461
Worlds Beyond Level 14 1992-1993	52.0 1006	57.9 534	45.3 472	54.8 810	40.3 196	37.4 334	59.2 672
Worlds Beyond Level 14 1993-1994	51.0 531	56.0 277	45.7 254	54.4 412	39.5 119	38.2 212	59.6 319
Worlds Beyond Level 14 1994-1995	51.6 744	50.1 377	53.1 367	57.1 536	37.5 208	36.9 301	61.6 443
Worlds Beyond Level 14 1995-1996	48.6 867	52.5 474	43.8 393	55.6 603	32.6 264	37.2 293	55.7 540
Worlds Beyond Level 14 1996-1997	56.5 852	56.4 443	56.5 409	59.7 672	44.4 180	44.7 333	64.0 519

Table B3. Mathematics: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 2 Sem. 1 1996-1997	88.9 2344	NA	NA	NA	NA	83.7 1008	92.8 1297
Math 2 Sem. 2 1996-1997	83.7 2379	NA	NA	NA	NA	75.9 1034	89.7 1310
Math 3 Sem. 1 1996-1997	69.5 2173	69.7 1070	69.4 1103	73.6 1595	58.3 578	60.3 1014	77.7 1159
Math 3 Sem. 2 1996-1997	62.0 2140	61.7 1055	62.2 1085	65.1 1583	53.1 557	52.3 987	70.3 1153
Math 4 Sem. 1 1996-1997	61.6 1988	63.1 993	60.0 995	65.9 1521	47.3 467	51.0 876	69.9 1112
Math 4 Sem. 2 1996-1997	54.2 2053	55.3 1029	53.0 1024	58.5 1563	40.2 490	42.9 912	63.2 1141

Note: Math 2 is processed differently than other tests. Programming is not in place to disaggregate these files by gender and ethnicity. Tables will be updated when programming is completed.

Table B4. Mathematics: Middle

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 7 Sem. 1 1996-1997	49.7 1454	48.2 769	51.2 685	53.3 1088	38.8 366	39.2 592	56.9 861
Math 8 Sem. 1 1996-1997	41.7 825	44.2 428	39.0 397	43.7 639	34.9 186	36.4 365	45.9 460
Math 8 Sem. 2 1996-1997	20.5 794	19.1 413	22.0 381	21.8 618	15.9 176	17.0 348	23.3 446

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Pre-Algebra 1993-1994	54.4	53.3	55.6	56.5	42.5	41.7	57.7
	706	368	338	600	106	144	562
Pre-Algebra 1994-1995	63.6	61.5	65.9	64.2	59.8	56.0	65.4
	698	361	337	601	97	134	564
Pre-Algebra 1995-1996	63.7	60.5	67.2	66.7	46.4	52.3	66.6
	755	392	363	645	110	128	613
Pre-Algebra 1996-1997	55.7	53.0	59.1	58.1	45.2	46.2	58.6
	741	411	330	606	135	171	570
Algebra I 1994-1995	71.8	70.2	73.2	72.1	68.4	60.7	73.1
	277	124	153	258	19	28	249
Algebra I 1995-1996	68.9	64.3	74.1	67.2	81.4	55.3	71.0
	351	185	166	308	43	47	303
Algebra I 1996-1997	70.3	66.1	73.8	70.7	66.7	59.0	71.6
	360	165	195	321	39	39	320
Cent. Academy Geometry (S. 2) 1996-1997	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	33	9	24	31	2	2	30
Cent. Academy Algebra II (S. 1) 1996-1997	94.1	66.7	100.0	NA	NA	NA	NA
	17	3	14				

Note: Due to confidentiality guidelines, results for individual students are not released.

Table B5. Mathematics: High

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Introductory Mathematics 1993-1994	17.6	15.2	19.4	22.6	7.6	10.4	22.0
	431	184	247	287	144	163	268
Introductory Mathematics 1994-1995	24.0	17.2	29.6	27.0	17.1	20.9	26.1
	387	174	213	270	117	153	234
Introductory Mathematics 1995-1996	15.4	9.3	20.3	21.8	8.5	10.2	20.2
	241	108	133	124	117	98	124
Introductory Mathematics 1996-1997	20.1	16.1	23.5	27.1	10.9	11.4	31.3
	299	137	162	170	129	167	131

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Introductory Algebra 1991-1992	37 611	34.3 315	39.9 296	36.8 478	37.6 133	39.9 138	36.2 473
Introductory Algebra 1992-1993	37.6 548	37.1 272	38.0 276	39.4 429	31.1 119	34.1 170	39.2 378
Introductory Algebra 1993-1994	42.9 140	38.4 73	47.8 67	42.3 123	47.1 17	45.2 31	42.2 109
Introductory Algebra 1994-1995	47.6 191	48.5 97	46.8 94	47.0 166	52.0 25	43.3 60	49.6 131
Introductory Algebra 1995-1996	27.6 163	24.4 82	30.9 81	29.1 134	20.7 29	25.5 55	29.8 104
Introductory Algebra 1996-1997	27.5 153	22.7 75	32.1 78	26.4 121	31.3 32	32.8 58	24.2 95
Algebra I 1994-1995	33.7 945	31.6 534	36.3 411	34.6 761	29.9 184	30.8 201	34.4 744
Algebra I 1995-1996	29.7 993	28.4 539	31.3 454	32.4 763	20.9 230	26.4 197	31.1 762
Algebra I 1996-1997	32.1 829	31.0 429	33.3 400	33.5 669	26.3 160	28.2 181	33.2 648
Geometry (Sem. 1) 1996-1997	74.2 256	69.7 145	80.2 111	73.4 214	78.6 42	57.1 28	76.3 224
Geometry (Sem. 2) 1996-1997	48.7 867	45.1 494	53.4 373	49.7 708	44.0 159	39.7 136	50.2 729
Algebra II (Sem. 1) 1995-1996	37.7 674	39.0 390	35.9 284	38.8 562	32.1 112	41.0 61	37.6 593
Algebra II (Sem. 1) 1996-1997	29.6 855	27.3 472	32.4 383	30.3 713	26.1 142	25.7 105	29.6 743
Algebra II (Sem. 2) 1995-1996	24.9 704	26.4 409	22.7 295	26.3 589	17.4 115	15.9 63	25.6 620
Algebra II (Sem. 2) 1996-1997	33.8 767	35.1 413	32.2 354	34.8 652	27.8 115	23.6 72	35.8 667

Table B6. Language Arts: Middle

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Language Arts 7 1996-1997	68.7	72.1	64.8	73.0	55.1	56.8	76.1
	1429	764	665	1088	341	546	883
Language. Arts 8 1996-1997	73.5	75.7	71.1	76.3	62.5	61.9	79.2
	1426	748	678	1133	293	472	949

Table B7. Language Arts: High

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
English 9 1993-1994	72.0	76.3	67.5	76.9	53.4	56.3	77.1
	1705	870	835	1349	356	414	1291
English 9 1994-1995	74.7	79.3	69.7	80.0	55.4	56.1	81.2
	1759	913	846	1382	377	456	1303
English 9 1995-1996	79.9	83.0	76.7	83.4	65.9	68.9	83.4
	1634	827	807	1306	328	341	1244
English 9 1996-1997	79.5	82.4	76.3	83.6	65.7	64.1	85.2
	1628	853	775	1252	376	446	1178
English 10 1991-1992	65.4	68.3	62.6	67.7	54.9	56.4	67.2
	1516	738	778	1243	273	259	1257
English 10 1992-1993	68.7	72.8	64.4	70.5	59.8	59.9	70.6
	1350	688	662	1121	229	247	1103
English 10 1993-1994	68.4	73.3	63.4	71.4	56.2	54.6	71.5
	1526	775	751	1229	297	280	1246
English 10 1994-1995	70.6	74.1	67.0	73.8	57.4	55.9	74.5
	1517	775	742	1219	298	315	1202
English 10 1995-1996	74.7	76.9	72.0	77.5	62.5	60.6	77.7
	1466	810	656	1189	277	236	1189
English 10 1996-1997	73.1	74.8	71.4	77.2	55.2	57.0	77.3
	1290	658	632	1049	241	256	1026

Table B8. Foreign Language: Middle

Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced
MS French 1993-1994	46.4	53.3	36.1	45.6	50.0	36.0	48.4
	153	92	61	125	28	25	128
MS French 1994-1995	54.5	61.3	45.8	53.2	62.5	52.2	55.2
	110	62	48	94	16	23	87
MS French 1995-1996	55.6	60.8	46.3	54.1	62.1	51.6	55.9
	151	97	54	122	29	31	118
MS French 1996-1997	37.7	30.8	48.1	39.3	30.4	25.9	40.8
	130	78	52	107	23	27	103
MS Spanish 1993-1994	46.5	54.1	37.0	47.1	44.3	45.2	47.0
	372	207	165	293	79	93	279
MS Spanish 1994-1995	45.6	47.2	43.7	44.9	48.4	43.5	46.4
	318	176	142	254	64	85	233
MS Spanish 1995-1996	49.4	53.5	43.8	50.2	47.3	52.7	47.7
	395	226	169	285	110	112	281
MS Spanish 1996-1997	52.3	57.5	44.7	52.0	53.2	49.3	53.7
	440	261	179	331	109	142	298

Table B9. Foreign Language: High

Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced
HS French 1993-1994	61.8	68.2	51.5	63.4	54.8	39.4	67.1
	173	107	66	142	31	33	140
HS French 1994-1995	70.5	71.5	68.8	74.2	57.8	53.7	74.8
	200	123	77	155	45	41	159
HS French 1995-1996	61.0	64.8	55.6	63.4	53.5	53.8	63.2
	177	105	72	134	43	26	144
HS French 1996-1997	56.6	60.8	50.0	61.3	34.5	38.7	60.7
	166	102	64	137	29	31	135

Test Name	All Students	Females	Males	Non-Minority Students	Minority Students	Free & Reduced	Non Free & Reduced
HS Spanish 1993-1994	49.2	52.9	44.3	51.6	38.2	41.4	51.0
	612	350	262	502	110	116	496
HS Spanish 1994-1995	53.5	53.4	53.7	55.9	44.4	47.9	54.8
	654	371	283	521	133	119	535
HS Spanish 1995-1996	56.4	59.3	53.4	59.8	43.4	49.6	58.4
	700	361	339	557	143	131	546
HS Spanish 1996-1997	59.8	66.8	50.2	60.5	57.2	53.2	61.7
	642	371	271	504	138	141	501

Table B10. Science: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Science 3: Structures of Life 1994-1995	75.6	76.6	74.6	79.2	61.2	69.4	80.9
	1617	798	819	1290	327	744	873
Science 3: Structures of Life 1995-1996	78.5	80.9	76.1	80.9	70.5	74.2	81.4
	1943	986	957	1499	444	708	1212
Science 3: Structures of Life 1996-1997	77.6	78.0	77.3	80.5	69.2	73.1	81.5
	1865	905	960	1398	467	849	1015
Science 3: Measurement 1994-1995	70.1	67.9	72.2	73.8	55.3	60.4	77.4
	1847	898	949	1478	369	793	1054
Science 3: Measurement 1995-1996	65.5	64.6	66.4	68.7	54.4	57.0	71.0
	1749	874	875	1363	386	640	1088
Science 3: Measurement 1996-1997	61.6	60.2	63.0	66.8	46.4	53.7	68.4
	1911	926	985	1428	483	875	1035
Science 3: Earth Materials 1994-1995	62.9	64.2	61.6	66.1	50.3	59.9	65.3
	1790	880	910	1426	364	785	1005
Science 3: Earth Materials 1995-1996	66.4	69.4	63.4	68.7	58.1	61.3	69.8
	1717	851	866	1347	370	628	1060
Science 3: Earth Materials 1996-1997	68.1	68.7	67.4	70.3	61.6	63.3	72.4
	1709	841	868	1258	451	815	894

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Science 4: Pillbug & Pond Life	83.8	83.6	83.9	86.2	74.3	77.5	88.8
1994-1995	1720	836	884	1366	354	764	956
Science 4: Pillbug & Pond Life	84.4	84.9	83.9	86.4	75.9	77.5	88.7
1995-1996	1720	834	886	1388	332	632	1063
Science 4: Pillbug & Pond Life	87.5	87.3	87.6	89.3	81.4	83.6	90.4
1996-1997	1858	940	918	1434	424	798	1060
Science 4: Water	81.2	81.2	81.3	85.7	65.1	75.9	85.4
1994-1995	1914	930	984	1499	415	838	1076
Science 4: Water	84.5	85.8	83.3	86.8	75.8	80.7	87.2
1995-1996	2041	992	1049	1612	429	751	1254
Science 4: Water	84.6	85.5	83.7	87.6	73.8	78.0	89.4
1996-1997	1841	925	916	1440	401	765	1075
Science 4: Electricity	67.7	66.8	68.5	71.8	52.2	58.1	74.9
1994-1995	1936	942	994	1530	406	836	1100
Science 4: Electricity	72.5	72.1	72.8	76.3	57.5	62.9	78.0
1995-1996	2051	994	1057	1637	414	727	1290
Science 4: Electricity	70.4	71.8	68.9	73.3	60.9	61.6	77.2
1996-1997	1856	929	927	1421	435	809	1047
Science 5: Landforms	68.7	66.1	71.2	71.7	56.3	58.1	76.0
1994-1995	1571	763	808	1267	304	645	926
Science 5: Landforms	67.7	67.8	67.6	71.3	55.5	58.8	73.1
1995-1996	1884	932	952	1459	425	680	1181
Science 5: Landforms	74.0	72.5	75.5	76.8	63.5	63.8	81.2
1996-1997	1952	954	998	1541	411	803	1148
Science 5: Powders & Crystals	81.4	81.9	80.9	84.1	70.3	73.5	86.6
1994-1995	1725	855	870	1392	333	688	1037
Science 5: Powders & Crystals	81.1	83.3	79.0	83.0	74.8	75.9	84.0
1995-1996	1972	978	994	1516	456	714	1228
Science 5: Powders & Crystals	84.3	86.2	82.3	86.8	75.9	78.3	88.5
1996-1997	1964	973	991	1512	452	816	1147

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Science 5: Levers & Pulleys	68.4	64.8	71.9	71.4	56.9	60.6	73.8
1994-1995	1579	785	794	1252	327	645	934
Science 5: Levers & Pulleys	65.4	62.3	68.5	69.7	51.3	58.9	69.9
1995-1996	1837	904	933	1408	429	671	1138
Science 5: Levers & Pulleys	68.1	66.6	69.6	72.0	54.5	58.9	74.9
1996-1997	1970	971	999	1530	440	834	1134

Table B11. Science: High School Biology

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Biology M1: Intro & Chem	57.2	54.6	60.6	60.5	42.1	40.9	60.0
1995-1996	1038	584	454	855	183	149	874
Biology M1: Intro & Chem.	61.5	60.4	62.7	66.1	44.9	46.2	65.5
1996-1997	1226	628	598	961	265	253	972
Biology M2: Cytology	55.2	51.8	59.7	58.5	41.6	43.5	57.5
1995-1996	1214	691	523	976	238	191	1002
Biology M2: Cytology	65.7	65.4	65.9	70.3	49.1	54.4	68.6
1996-1997	1270	651	619	995	275	261	1009
Biology M3: Genetics	41.0	40.3	42.1	43.3	31.5	33.7	42.4
1995-1996	1145	648	497	923	222	172	943
Biology M3: Genetics	46.0	45.3	46.8	49.6	31.9	32.5	49.4
1996-1997	1004	519	485	800	204	203	801
Biology M4: Evolution	73.9	72.1	76.3	77.3	59.5	63.4	75.9
1995-1996	1188	674	514	961	227	172	987
Biology M4: Evolution	72.5	69.9	75.3	76.9	56.9	56.1	76.7
1996-1997	1198	607	591	938	260	237	960
Biology M5: Kingdoms	33.8	35.3	31.9	36.9	20.9	25.7	35.5
1995-1996	1137	629	508	917	220	171	941
Biology M5: Kingdoms	45.4	44.6	46.1	48.6	32.9	31.1	48.8
1996-1997	1025	522	503	815	210	196	826

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Biology M6: Human Systems 1995-1996	59.2 1001	59.6 557	58.8 444	63.4 792	43.5 209	44.1 136	61.7 839
Biology M6: Human Systems 1996-1997	60.9 1210	61.6 619	60.2 591	67.1 954	37.9 256	45.3 234	64.6 975
Biology M7: Ecology 1995-1996	70.6 1111	68.3 616	73.3 495	74.0 897	56.1 214	62.0 179	72.1 914
Biology M7: Ecology 1996-1997	69.6 1058	68.1 542	71.1 516	74.1 839	52.1 219	51.7 207	74.0 850

Table B12. Science: High School Chemistry

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Chemistry Module 1 1995-1996	74.1 745	71.1 415	77.9 330	76.3 619	63.5 126	67.1 73	74.9 665
Chemistry Module 1 1996-1997	62.6 767	59.6 433	66.5 334	66.8 608	46.5 159	48.0 98	64.7 669
Chemistry Module 2 1995-1996	48.9 707	47.4 392	50.8 315	50.1 591	43.1 116	47.8 67	48.8 633
Chemistry Module 2 1996-1997	55.5 542	53.3 300	58.3 242	57.8 445	45.4 97	44.2 52	56.3 467
Chemistry Module 3 1995-1996	57.7 667	53.7 365	62.6 302	60.3 562	43.8 105	48.4 62	58.6 597
Chemistry Module 3 1996-1997	53.0 596	46.9 335	60.9 261	55.6 491	41.0 105	47.0 66	53.8 530
Chemistry Module 4 1995-1996	44.1 589	42.4 328	46.4 261	45.3 505	36.9 84	41.3 46	44.4 531
Chemistry Module 4 1996-1997	49.7 553	44.4 315	56.7 238	52.0 460	38.7 93	50.9 57	49.6 496

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Chemistry Module 5 1995-1996	63.9 582	62.6 321	65.5 261	64.8 497	58.8 85	66.7 45	63.3 526
Chemistry Module 5 1996-1997	55.3 561	52.4 309	58.7 252	55.8 468	52.7 93	51.0 51	55.4 487
Chemistry Module 6 1995-1996	48.3 613	45.0 331	52.1 282	48.7 522	46.2 91	44.2 52	48.2 548
Chemistry Module 6 1996-1997	42.7 412	42.6 230	42.9 182	44.3 350	33.9 62	27.9 43	44.4 369

Table B13. Science: High School Physics

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Physics M1: Forces 1995-1996	57.8 460	51.1 227	64.4 233	57.8 377	57.8 83	47.6 42	58.7 412
Physics M1: Forces 1996-1997	60.4 447	57.8 232	63.3 215	60.5 397	60.0 50	60.0 35	53.6 412
Physics M2: Work 1995-1996	71.5 452	64.0 222	78.7 230	70.9 371	74.1 81	70.7 41	71.3 404
Physics M2: Work 1996-1997	57.7 447	52.9 238	63.2 209	57.7 395	57.7 52	67.6 34	56.9 413
Physics M3: Heat 1995-1996	68.2 393	66.0 194	70.4 199	67.9 324	69.6 69	56.8 37	69.5 347
Physics M3: Heat 1996-1997	63.1 431	61.6 229	64.9 202	62.6 385	67.4 46	62.1 29	63.2 402
Physics M4: Light 1995-1996	49.2 429	46.5 213	51.9 216	48.9 354	50.7 75	40.5 37	50.1 383
Physics M4: Light 1996-1997	52.2 389	54.1 205	50.0 184	52.0 350	53.8 39	53.8 26	52.1 363

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Physics M5: Electricity 1995-1996	66.1	65.9	66.3	67.5	58.5	67.7	66.0
	345	179	166	292	53	31	306
Physics M5: Electricity 1996-1997	69.7	68.2	71.7	70.0	66.7	50.0	71.0
	297	170	127	273	24	18	279

Table B14. Social Science: Elementary

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Social Science 3 1995-1996	71.8	71.5	72.2	75.7	58.2	61.9	78.4
	2012	1002	1010	1569	443	727	1234
Social Science 3 1996-1997	70.0	69.7	70.3	74.4	56.5	59.2	78.7
	2021	1002	1019	1518	503	906	1115
Social Science 4 1995-1996	76.0	77.0	74.9	79.6	62.3	63.6	83.6
	2122	1045	1077	1679	443	747	1321
Social Science 4 1996-1997	77.7	77.5	77.9	81.7	63.1	66.1	86.2
	1959	992	967	1533	426	828	1131
Social Science 5 1995-1996	52.1	51.5	52.8	57.6	34.2	45.0	61.8
	2074	1022	1052	1591	483	744	1283
Social Science 5 1996-1997	53.8	51.3	56.3	58.6	36.5	40.6	67.5
	2109	1046	1063	1649	460	855	1253

Table B15. Social Science: Middle

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Central Acad. Government 1993-1994	89.4 66	82.4 34	96.9 32	90.9 55	81.8 11	71.4 7	91.5 59
Central Acad. Government 1994-1995	86.0 136	84.1 69	88.1 67	86.2 123	84.6 13	75.0 12	87.1 124
Central Acad. Government 1995-1996	94.5 110	90.9 55	98.2 55	95.9 98	83.3 12	88.9 9	95.0 100
Central Acad. Government 1996-1997	96.3 82	95.8 48	97.1 34	97.3 74	87.5 8	100.0 5	96.1 76

Table B16. Social Science: High

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
World History (Sem. 1) 1996-1997	71.4 1723	39.4 919	32.4 804	63.4 1331	8.28 392	29.0 493	49.9 1227
World History (Sem. 2) 1995-1996	44.2 1316	42.6 659	45.8 657	46.9 1078	31.9 238	30.8 266	50.3 1013
World History (Sem. 2) 1996-1997	39.0 1572	35.9 810	42.3 762	43.2 1178	26.4 394	27.1 461	46.5 1111
American History (Sem. 1) 1996-1997	40.2 1329	35.3 688	45.4 641	41.1 1059	36.7 270	30.7 274	42.7 1055
American History (Sem. 2) 1995-1996	59.1 1325	56.0 675	62.3 650	61.7 1099	46.5 226	44.7 170	61.4 1113
American History (Sem. 2) 1996-1997	61.5 1343	56.2 707	67.5 636	64.3 1091	49.6 252	47.4 234	64.5 1109

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Government 1993-1994	63.7	61.7	65.6	66.7	52.3	46.8	66.7
	535	256	279	426	109	79	456
Government 1994-1995	63.1	59.4	67.2	68.0	42.4	45.4	66.1
	1283	668	615	1040	243	185	1098
Government 1995-1996	62.9	61.9	64.0	68.0	43.9	44.2	65.9
	1280	669	611	1009	271	163	1104
Government 1996-1997	63.7	60.1	67.7	67.7	45.8	46.6	66.7
	1176	622	554	962	214	174	1002
Economics 1992-1993	48.0	46.3	49.4	50.7	27.5	27.8	49.1
	342	164	178	302	40	18	324
Economics 1993-1994	46.6	37.7	54.9	48.5	34.1	31.3	47.4
	337	162	175	293	44	16	321
Economics 1994-1995	46.2	42.2	50.5	46.9	41.2	35.1	47.3
	392	204	188	341	51	37	355
Economics 1995-1996	37.2	34.1	40.6	39.8	21.6	31.1	40.9
	712	372	340	610	102	45	660
Economics 1996-1997	40.0	33.1	48.0	42.5	25.7	28.6	47.1
	772	414	358	659	113	77	694

Table B17. Family & Consumer Science: High

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Food & Nutrition 1996-1997	28.8	31.6	23.8	35.1	15.3	21.6	33.7
	475	307	168	325	150	185	285
Sewing Technology 1996-1997	26.7	25.0	66.7	34.1	16.1	18.4	35.1
	75	72	3	44	31	38	37

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Child Development 1992-1993	63.2 495	64.9 439	50.0 56	67.9 377	48.3 118	52.5 141	67.5 354
Child Development 1993-1994	60.7 392	63.5 362	26.7 30	66.3 320	36.1 72	43.4 113	67.7 279
Child Development 1994-1995	67.7 465	70.1 421	45.5 44	74.7 336	49.6 129	57.3 131	71.9 334
Child Development 1995-1996	63.6 407	65.8 360	46.8 47	72.2 288	42.9 119	48.0 123	71.3 272
Child Development 1996-1997	55.0 429	56.6 396	36.4 33	62.4 314	34.8 115	46.3 177	61.8 249
Personal Development 1993-1994	53.0 202	57.9 145	40.4 57	56.2 137	46.2 65	47.1 68	56.0 134
Personal Development 1994-1995	44.7 132	50.0 104	25.0 28	48.5 99	33.3 33	37.3 51	49.4 81
Personal Development 1995-1996	58.1 105	55.8 77	64.3 28	63.0 73	46.9 32	57.1 35	59.7 67
Personal Development 1996-1997	64.8 125	65.9 88	62.2 37	65.0 80	64.4 45	58.8 51	68.9 74
Parenting 1992-1993	61.8 102	65.2 92	30.0 10	63.1 84	55.6 18	52.6 19	100.0 53
Parenting 1993-1994	57.5 134	60.7 117	35.3 17	60.6 109	44.0 25	41.4 29	61.9 105
Parenting 1994-1995	61.7 81	66.2 71	30.0 10	68.7 67	28.6 14	22.2 18	73.0 63
Parenting 1995-1996	35.8 53	37.8 45	25.0 8	38.7 31	31.8 22	25.0 16	45.5 33
Parenting 1996-1997	52.2 138	53.9 128	30.0 10	57.1 105	36.4 33	40.4 47	58.9 90

Table C1. 1996-1997 Elementary Mathematics Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 5 Sem. 1 1996-1997	56.7	56.9	56.5	61.1	41.8	43.3	66.6
	2199	1081	1118	1701	498	932	1265
Math 5 Sem. 2 1996-1997	57.2	57.0	57.3	61.0	44.1	44.2	66.6
	2144	1068	1076	1663	481	902	1241

Table C2. 1996-1997 Middle School Mathematics Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Math 6 Sem. 1 1996-1997	41.6	40.9	42.4	44.9	32.0	30.6	50.6
	1722	878	844	1288	434	771	950
Math 6 Sem. 2 1996-1997	26.5	24.4	28.6	30.2	15.0	17.5	33.5
	1686	862	824	1267	419	743	942
Math 7 Sem. 2 1996-1997	32.5	27.8	37.7	36.9	18.4	23.1	38.8
	1270	663	607	971	299	506	763

Table C3. 1996-1997 Middle School Language Arts Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Lang. Arts 6 (pilot) 1996-1997	72.3	74.5	70.1	76.8	58.3	63.0	78.9
	1751	889	862	1324	427	730	1020

Table C4. 1996-1997 Middle School Science Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Science 6 Health (pilot)	50.3	46.6	54.0	54.6	35.6	38.9	58.7
1996-1997	1059	528	531	820	239	447	612
Science 6 Unit 1/4 (pilot)	46.2	42.7	49.9	51.4	30.9	29.6	58.1
1996-1997	1311	674	637	978	333	547	763
Science 6 Unit 3 (pilot)	43.0	41.5	44.5	47.1	28.3	32.1	52.1
1996-1997	1156	569	587	902	254	527	629
Science 6 Unit 5/4 & 6 (pilot)	60.0	59.3	60.8	65.9	39.8	44.2	69.7
1996-1997	1458	752	706	1131	327	552	905
Science 7 Health (pilot)	33.3	36.2	30.1	40.9	21.1	23.2	45.4
1996-1997	285	152	133	176	109	155	130
Science 7 Unit 1 (pilot)	68.6	65.4	72.0	73.3	55.0	57.5	76.2
1996-1997	1346	702	644	999	347	515	823
Science 7 Unit 2 (pilot)	68.9	66.3	71.5	76.9	49.7	53.5	80.8
1996-1997	546	279	267	385	161	230	313
Science 7 Unit 3 (pilot)	37.4	33.4	41.9	42.8	21.1	23.5	45.6
1996-1997	1429	761	668	1073	356	528	899
Science 7 Unit 6 (pilot)	58.2	58.5	57.8	64.4	33.3	44.2	66.0
1996-1997	239	123	116	191	48	86	153
Science 8 Unit 1 (pilot)	47.4	45.3	49.4	53.3	25.0	36.2	52.4
1996-1997	1024	516	508	808	216	323	699
Science 8 Unit 2 (pilot)	37.3	33.7	41.0	42.6	19.9	26.9	42.4
1996-1997	1110	561	549	849	261	364	743
Science 8 Unit 4 (pilot)	15.6	12.3	19.4	19.1	7.3	11.1	17.7
1996-1997	461	244	217	324	137	144	317
Science 8 Unit 5 (pilot)	4.5	4.8	4.2	5.7	1.1	2.8	5.6
1996-1997	336	168	168	246	90	141	195
Science 8 Unit 6 (pilot)	4.1	4.6	3.7	5.5	1.3	1.1	6.1
1996-1997	460	241	219	311	149	180	280

Table C5. 1996-1997 High School Earth Science Pilot Test Results

Test Name	All Students	Females	Males	Non-minority Students	Minority Students	Free & Reduced	Non Free & Reduced
Earth Sci. Astronomy 1996-1997	65.3 992	61.6 523	69.5 469	71.3 728	48.9 264	52.6 293	70.7 699
Earth Sci. Geology 1996-1997	52.2 996	51.0 520	53.6 476	57.7 732	37.1 264	35.3 292	59.3 703
Earth Sci. Meteorology 1996-1997	49.6 905	46.6 481	53.1 424	56.0 663	32.2 242	33.6 265	56.3 639
Earth Sci. Oceanography 1996-1997	57.9 1026	56.0 539	60.0 487	63.5 751	42.5 275	44.8 306	63.5 720
Earth Sci. Rocks/Minerals 1996-1997	49.2 1010	47.5 537	51.2 473	54.5 747	34.2 263	36.8 291	54.4 717

1997-98 Test Development Plans

Development of criterion-referenced tests will continue throughout 1997-98 for the following areas:

Mid-year:
Finalizing
- Math 5 Semester 1
- Math 6 Semester 1

End-of-year:
Finalizing
- Language Arts 6
- Math 5 Semester 2
- Math 6 Semester 2
- Math 7 Semester 2

Piloting
- French
- Social Science 6, 7, 8
- Reading (Scholastic), Grades 1-8.

Tests for middle and high school science continue to be developed on an ongoing basis. Some modular tests will be finalized, while others will be re-piloted.

Table D1. ITBS Historical Results
Grade 3 & Grade 4 Percentile Ranks
National Student Norms

	Grade 3 1995-96	Grade 3 1996-97	Grade 4 1995-96	Grade 4 1996-97
SCHOOL	Core Total	Core Total	Core Total	Core Total
Adams	56	67	58	65
Brooks	33	36	35	42
Cattell	52	40	54	54
Douglas	61	60	61	60
Edmunds	35	41	52	31
Findley	43	49	58	49
Garton	34	41	54	43
Granger	63	40	56	55
Greenwood	82	74	84	81
Hanawalt	83	81	83	86
Hillis	73	78	67	66
Howe	51	49	72	60
Hubbell	62	67	76	63
Jackson	51	44	60	53
Jefferson	77	72	81	78
Longfellow	29	51	31	30
Lovejoy	52	51	54	56
Lucas	37	43	26	31
Madison	52	63	48	46
Mann	43	43	46	45
Mc Kee	39	40	34	42
Mc Kinley	35	23	44	31
Mitchell	51	47	57	58
Monroe	58	55	59	53
Moore	57	53	69	57
Moulton	39	26	34	46
Oak Park	52	46	59	51
Park Avenue	51	57	59	60
Perkins	51	36	63	45
Phillips	62	57	64	58
Pleasant Hill	64	67	58	58
Stowe	51	45	62	57
Studebaker	51	69	57	58
Wallace	36	45	44	34
Watrous	74	56	65	64
Willard	34	29	39	34
Windsor	63	66	61	69
Woodlawn	56	55	60	54
Wright	54	47	49	51
DISTRICT	55	55	58	55

Table D2. ITBS Percentile Rank Trends
Grade 3 (1995-96) To Grade 4 (1996-97)
National Student Norms

	Grade 3 1995-96	Grade 4 1996-97	1995-96 to 1996-97
SCHOOL	Core Total	Core Total	Change
Adams	56	65	9
Brooks	33	42	9
Cattell	52	54	2
Douglas	61	60	-1
Edmunds	35	31	-4
Findley	43	49	6
Garton	34	43	9
Granger	63	55	-8
Greenwood	82	81	-1
Hanawalt	83	86	3
Hillis	73	66	-7
Howe	51	60	9
Hubbell	62	63	1
Jackson	51	53	2
Jefferson	77	78	1
Longfellow	29	30	1
Lovejoy	52	56	4
Lucas	37	31	-6
Madison	52	46	-6
Mann	43	45	2
Mc Kee	39	42	3
Mc Kinley	35	31	-4
Mitchell	51	58	7
Monroe	58	53	-5
Moore	57	57	0
Moulton	39	46	7
Oak Park	52	51	-1
Park Avenue	51	60	9
Perkins	51	45	-6
Phillips	62	58	-4
Pleasant Hill	64	58	-6
Stowe	51	57	6
Studebaker	51	58	7
Wallace	36	34	-2
Watrous	74	64	-10
Willard	34	34	0
Windsor	63	69	6
Woodlawn	56	54	-2
Wright	54	51	-3
DISTRICT	55	55	0

Table D3. ITBS Grade Equivalent Score Trends
Grade 3 (1995-96) To Grade 4 (1996-97)

	GRADE 3 1995-96	GRADE 4 1996-97	
SCHOOL	Core Total	Core Total	TREND
Adams	3.6	5.3	1.7
Brooks	3.0	4.2	1.2
Cattell	3.6	4.7	1.1
Douglas	3.8	4.9	1.1
Edmunds	3.1	3.7	0.6
Findley	3.3	4.5	1.2
Garton	3.0	4.3	1.3
Granger	3.9	4.7	0.8
Greenwood	4.7	6.2	1.5
Hanawalt	4.7	6.4	1.7
Hillis	4.3	5.3	1.0
Howe	3.5	4.9	1.4
Hubbell	3.8	5.1	1.3
Jackson	3.5	4.7	1.2
Jefferson	4.4	5.9	1.5
Longfellow	2.9	3.7	0.8
Lovejoy	3.5	4.7	1.2
Lucas	3.1	3.7	0.6
Madison	3.6	4.4	0.8
Mann	3.3	4.4	1.1
McKee	3.1	4.2	1.1
McKinley	3.1	3.7	0.6
Mitchell	3.5	4.7	1.2
Monroe	3.7	4.7	1.0
Moore	3.7	4.7	1.0
Moulton	3.1	4.4	1.3
Oak Park	3.6	4.6	1.0
Park Avenue	3.5	4.9	1.4
Perkins	3.5	4.4	0.9
Phillips	3.8	4.8	1.0
Pleasant Hill	3.9	4.8	0.9
Stowe	3.5	4.7	1.2
Studebaker	3.5	4.8	1.3
Wallace	3.1	3.9	0.8
Watrous	4.3	5.2	0.9
Willard	3.0	3.9	0.9
Windsor	3.9	5.4	1.5
Woodlawn	3.7	4.7	1.0
Wright	3.6	4.6	1.0
DISTRICT	3.6	4.7	1.1

Table E1. ITBS Historical Results
Grade 6 & Grade 7 Percentile Ranks
National Student Norms

	Grade 6 1995-96	Grade 6 1996-97	Grade 7 1995-96	Grade 7 1996-97
SCHOOL	Core Total	Core Total	Core Total	Core Total
Brody	62	60	62	62
Callanan	66	67	69	71
Goodrell	47	45	56	53
Harding	45	37	47	48
Hiatt	37	42	42	38
Hoyt	51	46	49	50
Mc Combs	53	57	55	52
Meredith	63	62	56	62
Merrill	70	69	71	70
Weeks	58	52	52	53
DISTRICT	56	56	56	57

Table E2. ITBS Percentile Rank Trends
Grade 6 (1995-96) To Grade 7 (1996-97)
National Student Norms

	Grade 6 1995-96	Grade 7 1996-97	1995-96 to 1996-97
SCHOOL	Core Total	Core Total	Change
Brody	62	62	0
Callanan	66	71	5
Goodrell	47	53	6
Harding	45	48	3
Hiatt	37	38	1
Hoyt	51	50	-1
Mc Combs	53	52	-1
Meredith	63	62	-1
Merrill	70	70	0
Weeks	58	53	5
DISTRICT	56	57	1

Table E3. ITBS Grade Equivalent Score Trends
Grade 6 (1995-96) To Grade 7 (1996-97)

	GRADE 6 1995-96	GRADE 7 1996-97	
SCHOOL	Core Total	Core Total	TREND
Brody	7.4	8.5	1.1
Callanan	7.7	9.5	1.8
Goodrell	6.3	7.7	1.4
Harding	6.2	7.4	1.2
Hiatt	5.7	6.6	0.9
Hoyt	6.5	7.6	1.1
McCombs	6.7	7.7	1.0
Meredith	7.5	8.5	1.0
Merrill	8.1	9.4	1.3
Weeks	7.2	7.8	0.6
DISTRICT	7.0	8.1	1.1

Table F1. Percent of Students Scoring on Grade Level (50th Percentile) or Higher
1996-97 Iowa Tests of Basic Skills

School	Core Total		Reading Total		Language Total		Math Total		Sources of Information Total	
	Gr. 3	Gr. 4	Gr. 3	Gr. 4	Gr. 3	Gr. 4	Gr. 3	Gr. 4	Gr. 3	Gr. 4
Adams	66.7	73.3	63.3	64.4	71.4	82.2	66.7	57.8	63.3	64.4
Brooks	34	40.5	23.4	24.3	31.9	35.1	51.1	56.8	51.1	41.7
Cattell	29.4	48.5	27.1	51.5	32.4	45.6	47.8	55.9	42.9	51.5
Douglas	50.6	59.1	50.6	56.7	55.6	69.7	61.7	54.5	65.4	70.1
Edmunds	39.5	31	40.9	33.3	38.6	28.6	44.2	26.2	43.2	33.3
Findley	48.9	48.7	51.1	39.5	44.4	53.5	57.8	51.3	64.4	53.5
Garton	31.9	33.3	26	47.5	31.3	40	59.6	41	30	40
Granger	43.1	45	47.5	41.5	42.4	47.5	39.7	51.2	41.4	51.2
Greenwood	69.2	77.6	66.7	76	75.8	79.6	70.8	80	74.2	84
Hanawalt	84	94.7	78	87.7	84	91.2	78	89.5	74.4	91.3
Hillis	80.4	60.4	75.4	52.8	83.9	66	86	62.3	78.9	66
Howe	50.9	58.5	47.3	53.7	54.5	61	56.4	56.1	49.1	65.9
Hubbell	64.2	61.5	64.2	67.3	69.8	51.9	60.4	69.2	73.6	86.5
Jackson	44.4	50	47.7	59.4	42.2	38.5	48.4	61.5	56.2	50.8
Jefferson	69.7	81.3	76.3	78.7	69.7	76	75	88	76	93.2
Longfellow	47.8	12.8	56.5	10.3	43.5	12.8	65.2	30.8	60.9	17.9
Lovejoy	44.2	52.3	44.4	50	47.7	50	54.5	56.8	61.4	56.8
Lucas	32.3	17.9	29	22.5	40.6	30	55.9	35.9	38.2	38.5
Madison	57.8	36.7	64.4	40	66.7	43.3	42.2	36.7	73.3	40
Mann	39.5	41.4	41	40	43.6	46.7	42.1	54.8	46.2	62.5
Mc Kee	30.8	31.7	22.5	33.3	35	41.5	53.8	40.5	30	35.7
Mc Kinley	15	16.7	20	10	7.5	33.3	27.5	40	22.5	23.3
Mitchell	46.3	55.3	48.8	60.5	43.9	57.9	40.5	60.5	52.4	73
Monroe	41.9	50	50.8	52.9	52.4	47.1	46.8	48.5	55.6	61.8
Moore	47.4	56.7	52.6	55	52.6	63.3	52.6	56.7	58.9	65
Moulton	14	39.5	13.7	39.5	20	50	23.5	44.7	38	42.1
Oak Park	44.1	49	45.1	48.1	39.1	50	50	52.9	51.4	53.8
Park Avenue	57.4	65.2	51.8	52.9	52.7	54.9	70.9	74.6	69.6	70.8
Perkins	34.2	35.8	36.5	43.3	32.9	35.8	42.5	38.8	35.3	40.3
Phillips	55.2	54.4	53.7	61.8	55.2	53.6	65.7	66.7	62.7	59.4
Pleasant Hill	55.9	58.2	64.7	53.6	61.8	58.9	76.5	54.5	67.6	50
Stowe	39.3	52.8	40.6	50.9	39.3	54.7	50	62.3	43.7	59.6
Studebaker	72.4	56.1	72.4	63.2	65.5	58.8	70.7	54.5	70.7	63.2
Wallace	35.9	30	17.9	30	41	30	64.1	36.7	56.4	43.3
Watrous	62.7	59	51	61.5	60.8	64.1	49	59	56.9	61.5
Willard	20	30.6	26.4	30.6	23.5	22.6	34	37.1	32	29
Windsor	65.5	63.5	65.5	68.3	55.4	63.5	77.2	77.8	61.4	74.6
Woodlawn	49.2	57.1	53.7	53.4	47.8	57.6	48.5	56.1	48.5	57.6
Wright	42.9	42.5	45.2	52.5	42.9	53.7	50	45	50	53.7
District	48.5	51.7	48.4	51.6	49.4	52.7	55.6	56.4	55.0	57.6

Table F2. Percent of Students Scoring on Grade Level (50th Percentile) or Higher
1996-97 Iowa Tests of Basic Skills

School	Core Total		Reading Total		Language Total		Math Total		Sources of Information Total	
	Gr. 6	Gr. 7	Gr. 6	Gr. 7	Gr. 6	Gr. 7	Gr. 6	Gr. 7	Gr. 6	Gr. 7
Brody	59.4	64.4	58.2	60.1	55.3	61.6	64.2	68	61.9	67.7
Callanan	65.3	69.5	63.2	64.4	62.1	69.4	67.4	68.8	68.9	75.4
Goodrell	44.1	54.6	41.9	44	40.1	51.6	51.7	59.8	48.9	57.6
Harding	34.7	48.2	27.3	36.2	30.6	49.8	39.5	52.2	44.1	44.9
Hiatt	36.5	33.9	35.8	31.9	40.4	31	43.4	37.6	43.9	36.5
Hoyt	47	51.6	43.5	42.9	49.1	55.2	47.3	51	51.2	50.7
Mc Combs	59.1	53.8	59.9	48.9	56.2	51.7	60	55.1	65.6	55.1
Meredith	62.9	63.8	64.1	62.7	56.1	62.6	61.4	66.2	61.8	61.4
Merrill	72.5	72.7	76.8	69.3	68.5	74.7	68.3	72.5	77	75.9
Weeks	53.7	53	50.7	46.8	49.8	54.6	59.7	54.6	58.3	55.1